

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

BA-5D CHASSIS

| <u>MODEL NAME</u> | <u>REMOTE COMMANDER</u> | <u>DESTINATION</u> | <u>CHASSIS NO.</u> |
|-------------------|-------------------------|--------------------|--------------------|
| KV-29FS105 | RM-Y180 | ARGENTINA | SCC-S62W-A |
| KV-29FS105 | RM-Y180 | BRAZIL | SCC-S63L-A |
| KV-34FS105 | RM-Y180 | ARGENTINA | SCC-S62Y-A |
| KV-34FS105 | RM-Y180 | BRAZIL | SCC-S63K-A |
| KV-38FS105 | RM-Y180 | ARGENTINA | SCC-S62X-A |
| KV-38FS105 | RM-Y180 | BRAZIL | SCC-S63M-A |

ORIGINAL MANUAL ISSUE DATE: 4/2004

REVISION DATE

SUBJECT

4/2004

No revisions or updates are applicable at this time.

TRINITRON® COLOR TELEVISION
SONY®

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| KV-38FS105 | RM-Y180 | ARGENTINA | SCC-S62X-A |
| KV-38FS105 | RM-Y180 | BRAZIL | SCC-S63M-A |



KV-34FS105




RM-Y180

TRINITRON® COLOR TELEVISION

SONY®

TABLE OF CONTENTS

| SECTION TITLE | PAGE |
|--|-----------|
| Specifications | 4 |
| Warnings and Cautions | 5 |
| Safety Check-Out | 6 |
| Self-Diagnostic Function | 7 |
| SECTION 1: DISASSEMBLY | 10 |
| 1-1. Rear Cover Removal | 10 |
| 1-2. Chassis Assembly Removal | 10 |
| 1-3. Service Position | 10 |
| 1-4. Picture Tube Removal | 11 |
| Anode Cap Removal Procedure | 11 |
| SECTION 2: SET-UP ADJUSTMENTS | 12 |
| 2-1. Beam Landing | 12 |
| 2-2. Convergence | 13 |
| 2-3. Focus | 15 |
| 2-4. Screen (G2) | 15 |
| 2-5. White Balance Adjustments | 15 |
| SECTION 3: SAFETY RELATED ADJUSTMENTS | 16 |
| 3-1.  R530, R531 Confirmation Method (Hold-Down Confirmation) and Readjustments | 16 |
| 3-2. B+ Voltage Confirmation and Adjustments | 16 |
| SECTION 4: CIRCUIT ADJUSTMENTS | 17 |
| 4-1. Setting Service Adjustment Mode | 17 |
| 4-2. Memory Write Confirmation Method | 17 |
| 4-3. Remote Adjustment Buttons and Indicators | 17 |
| 4-4. Service Data Lists | 18 |
| 4-5. ID Map Table | 24 |
| 4-6. A Board Adjustments | 25 |
| SECTION 5: DIAGRAMS | 28 |
| 5-1. Circuit Boards Location | 28 |
| 5-2. Printed Wiring Boards and Schematic Diagrams Information | 28 |
| 5-3. Block Diagram | 29 |
| 5-4. Schematics and Supporting Information | 30 |
| A Board Schematic Diagram | 30 |
| C Board Schematic Diagram | 33 |
| GK Board Schematic Diagram | 34 |
| HS Board Schematic Diagram | 35 |
| V Board Schematic Diagram | 36 |
| 5-5. Semiconductors | 39 |
| SECTION 6: EXPLODED VIEWS | 40 |
| 6-1. Chassis (KV-29FS105 ONLY) | 40 |
| 6-2. Picture Tube (KV-29FS105 ONLY) | 41 |
| 6-3. Chassis (KV-34FS105 ONLY) | 42 |
| 6-4. Picture Tube (KV-34FS105 ONLY) | 43 |
| 6-5. Chassis (KV-38FS105 Only) | 44 |
| 6-6. Picture Tube (KV-38FS105 Only) | 45 |
| SECTION 7: ELECTRICAL PARTS LIST | 46 |

SPECIFICATIONS

| | KV-29FS105 | KV-34FS105 | KV-38FS105 |
|--|---|---|---|
| Power requirements | 110V-220V, 50-60Hz | 110V-220V, 50-60Hz | 110V-220V, 50-60Hz |
| Number of Inputs/Outputs | | | |
| Video ¹⁾ | 3 | 3 | 3 |
| S Video ²⁾ | 1 | 1 | 1 |
| Y, P_B, P_R ³⁾ | 1 | 1 | 1 |
| Audio ⁴⁾ | 3 | 3 | 3 |
| Audio Out ⁵⁾ | 1 | 1 | 1 |
| Speaker output (W) | 10W x 2 | 10W x 2 | 10W x 2 |
| Power Consumption (W) | | | |
| In use (Max) | 180W | 190W | 195W |
| In Standby | 1W | 1W | 1W |
| Dimensions(W/H/D) | | | |
| mm | 768 x 589 x 497 mm | 898 x 696 x 576 mm | 985 x 774 x 633 mm |
| in | 30 ¹ / ₄ x 23 ¹ / ₄ x 19 ⁵ / ₈ in | 35 ³ / ₈ x 27 ³ / ₈ x 22 ⁵ / ₈ in | 38 ³ / ₄ x 30 ¹ / ₂ x 25 in |
| Mass | | | |
| kg | 49.5 kg | 75 kg | 98.4 kg |
| lbs | 109 lbs. 2 oz. | 165 lbs. 6 oz. | 216 lbs. 8 oz. |

- 1) 1 Vp-p 75 ohms unbalanced, sync negative
2) Y: 1 Vp-p 75 ohms unbalanced, sync negative
C: 0.286 Vp-p (Burst signal), 75 ohms
3) Y: 1.0 Vp-p, 75 ohms, sync negative;
PB: 0.7 Vp-p, 75 ohms
PR: Vp-p, 75 ohms
4) 500 mVrms (100% modulation), Impedance: 47 kilohms
5) More than 408 mVrms at the maximum volume setting (variable)
More than 408 mVrms (fix)

Television system

PAL-M, PAL-N, NTSC

Channel coverage

VHF: 2-13/ UHF: 14-69/ CATV: 1-125

Picture tube

FD Trinitron[®] tube

Visible screen size

27 inch picture measured diagonally (KV-29FS105 Only)

32 inch picture measured diagonally (KV-34FS105 Only)

36 inch picture measured diagonally (KV-38FS105 Only)

Actual screen size

29 inch measured diagonally (KV-29FS105 Only)

34 inch measured diagonally (KV-34FS105 Only)

38 inch measured diagonally (KV-38FS105 Only)

Antenna

75-ohm external antenna terminal for VHF/UHF

Supplied Accessories

Size AA (R6) batteries (2)

Remote Control RM-Y180 (1)

Optional Accessories

VMC-810S/820S

VMC 720M

YC-YC-15/30V

RK74A

EAC-66U/V

TV Stand: SU-27FD5 (KV-29FS105 Only)

TV Stand: SU-32FD4 (KV-34FS105 Only)

TV Stand: SU-36FS1 (KV-38FS105 Only)

WARNINGS AND CAUTIONS

CAUTION


Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the ac power line.



SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and  mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

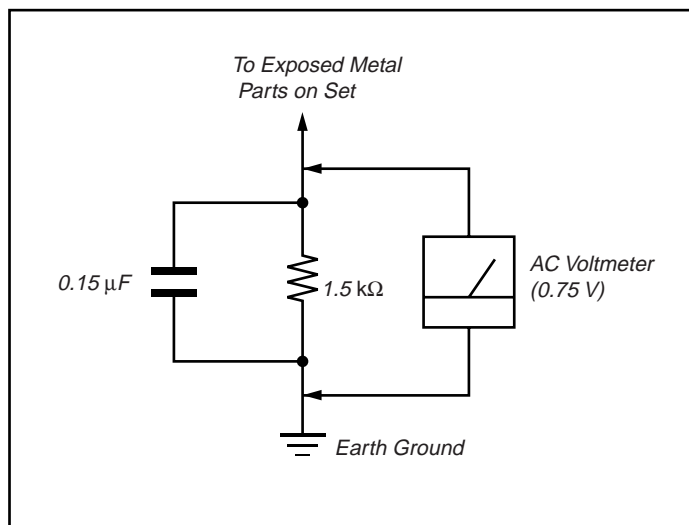


Figure A. Using an AC voltmeter to check AC leakage.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliampmeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

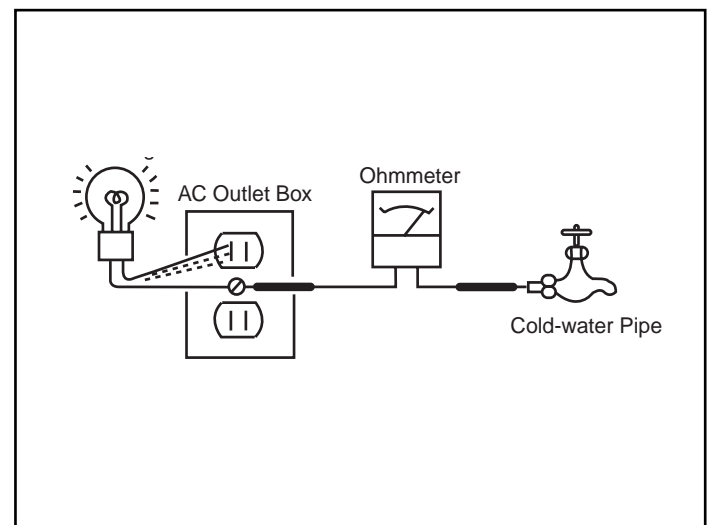


Figure B. Checking for earth ground.

SELF-DIAGNOSTIC FUNCTION



The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

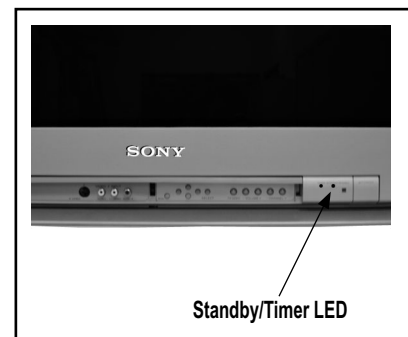
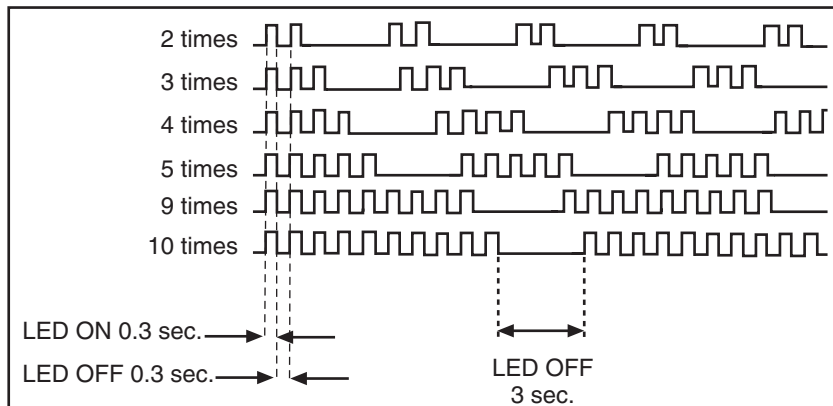
Results for all of the following diagnostic items are displayed on screen. If the screen displays a "0", an error has occurred.

| Diagnostic Item | No. of times STANDBY / TIMER lamp flashes | Probable Cause Location | Detected Symptoms |
|------------------------|---|--|--|
| Power does not turn on | Does not light | <ul style="list-style-type: none"> Power cord is not plugged in. Fuse is burned out (F601). (GK Board) | <ul style="list-style-type: none"> Power does not come on. No power is supplied to the TV. AC Power supply is faulty. |
| +B overcurrent (OCP)* | 2 times | <ul style="list-style-type: none"> H.OUT (Q502) is shorted. (A Board) IC702 is shorted. (C Board) | <ul style="list-style-type: none"> Power does not come on. Load on power line shorted. |
| +B overvoltage (OVP) | 3 times | <ul style="list-style-type: none"> IC501 is faulty. (A Board) If a high is supplied to pin 2 of IC501. (A Board) | <ul style="list-style-type: none"> Has entered standby mode. |
| I-Prot | 4 times | <ul style="list-style-type: none"> +12V is not supplied. (A Board) IC561 is faulty. (A Board) | <ul style="list-style-type: none"> Has entered standby state after horizontal raster. Vertical deflection pulse is stopped. Power line is shorted or power supply is stopped. |
| IK (AKB) | 5 times | <ul style="list-style-type: none"> Video OUT (IC561) is faulty. (A Board) IC702 is faulty. (C Board) Screen (G2) is improperly adjusted. ** | <ul style="list-style-type: none"> No raster is generated. CRT Cathode current detection reference pulse output is small. |
| Zero Cross | 9 times | <ul style="list-style-type: none"> No zero cross pulses on pin 45 IC1001. (A Board) | <ul style="list-style-type: none"> Power does not come on. |
| 9V Check | 10 times | <ul style="list-style-type: none"> Relay failed (RY600) | <ul style="list-style-type: none"> Power does not come on. |

* If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

** Refer to Screen (G2) adjustments in Section 2-4 of this manual

Display of Standby/Timer LED Flash Count



| Diagnostic Item | Flash Count* |
|-----------------|--------------|
| +B Overcurrent | 2 times |
| +B Overvoltage | 3 times |
| V-STOP | 4 times |
| IK (AKB) | 5 times |
| Zero Cross | 9 times |
| 9V | 10 times |

*One flash count is not used for self-diagnostic.

Stopping the Standby/Timer LED Flash

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LAMP from flashing.

Self-Diagnostic Screen Display

For errors with symptoms such as "power sometimes shuts off" or "screen sometimes goes out" that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:

DISPLAY ➡ Channel **5** ➡ Sound volume **1** ➡ Power ON.

| SELF DIAGNOSIS | | |
|----------------|---|---|
| 2: +B OCP | 0 | Numeral "0" means that no fault was detected. |
| 3: +B OVP | 0 | |
| 4: VSTOP | 0 | Numeral "1" means a fault was detected one time only. |
| 5: AKB | 1 | |
| 9: ZCD | 0 | |
| 10: 9VON | 0 | |
| 101: WDT | 0 | |
| Serial: xxxxxx | | |
| Model: xxxxxx | | |

Handling of Self-Diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to "0".

Unless the result display is cleared to "0", the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

Clearing the Result Display

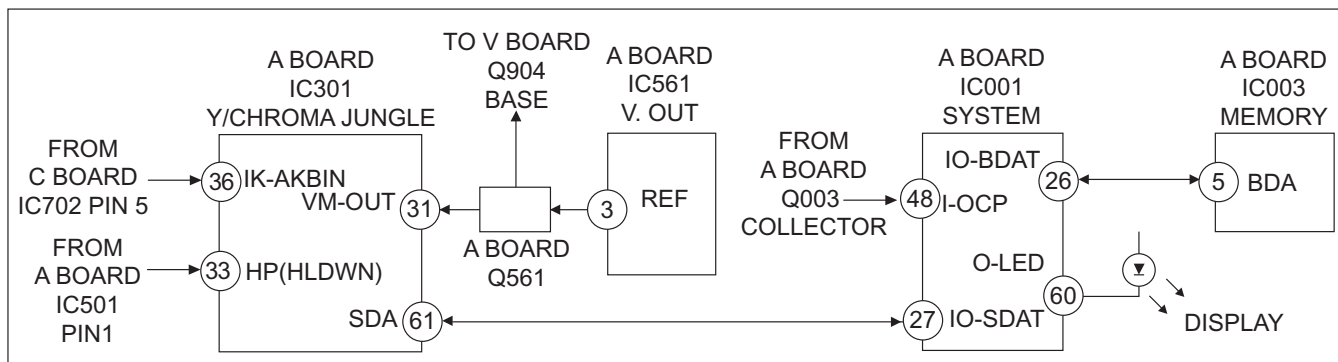
To clear the result display to "0", press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel **8** ➡ **ENTER**

Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

Self-Diagnostic Circuit



+B overcurrent (OCP)

Occurs when an overcurrent on the +B (135V) line is detected by pin 48 of IC001 (A Board). If the voltage of pin 48 of IC001 (A Board) is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

+B overvoltage (OVP)

Occurs when a high is felt on pin 2 of IC501 (A Board).

I-PROT

Occurs when an absence of the vertical deflection pulse is detected by pin 31 of IC301 (A Board). Power supply will shut down when waveform interval exceeds 2 seconds.

IK (AKB)

If the RGB levels* do not balance within 2 seconds after the power is turned on, this error will be detected by IC301 (A Board). TV will stay on, but there will be no picture.

*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K).

Zero Cross

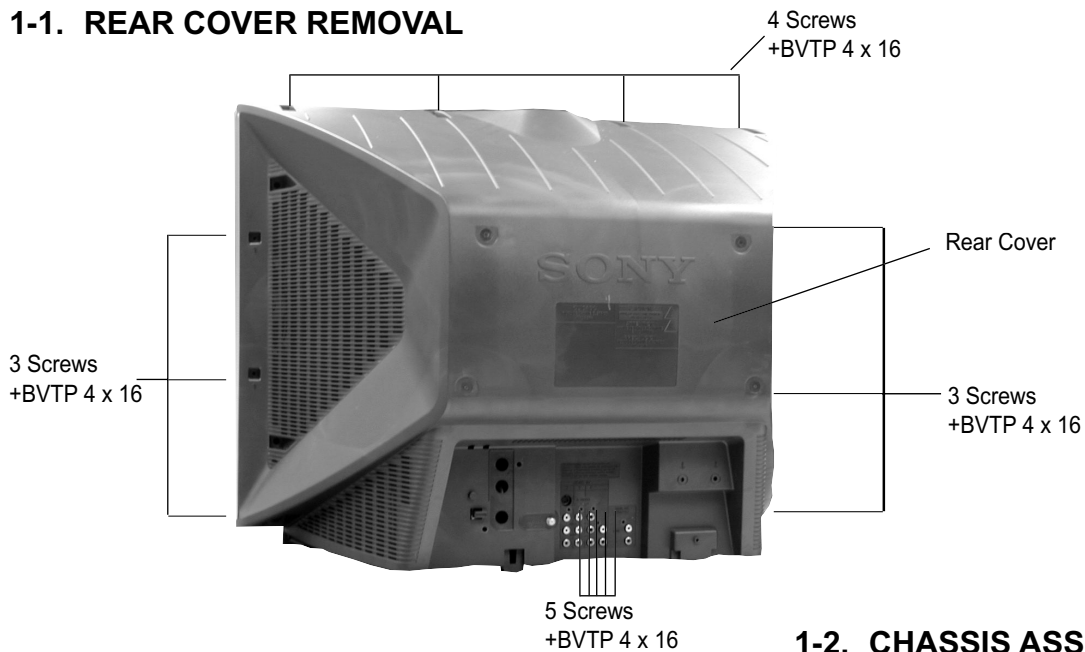
Check Q691 collector (GK Board) 7.5V STBY goes to 0V when the set is turned on.

9V Check

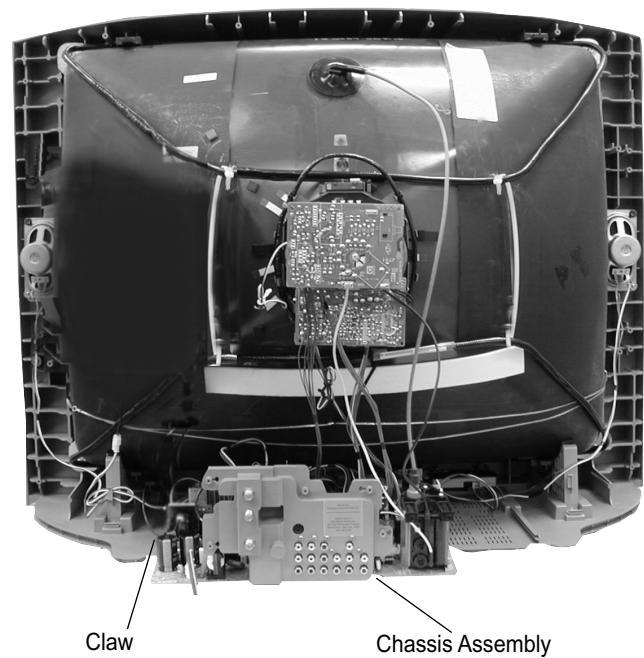
Check Q691 collector (GK Board) 7.5V STBY goes to 0V when the set is turned on.

SECTION 1: DISASSEMBLY

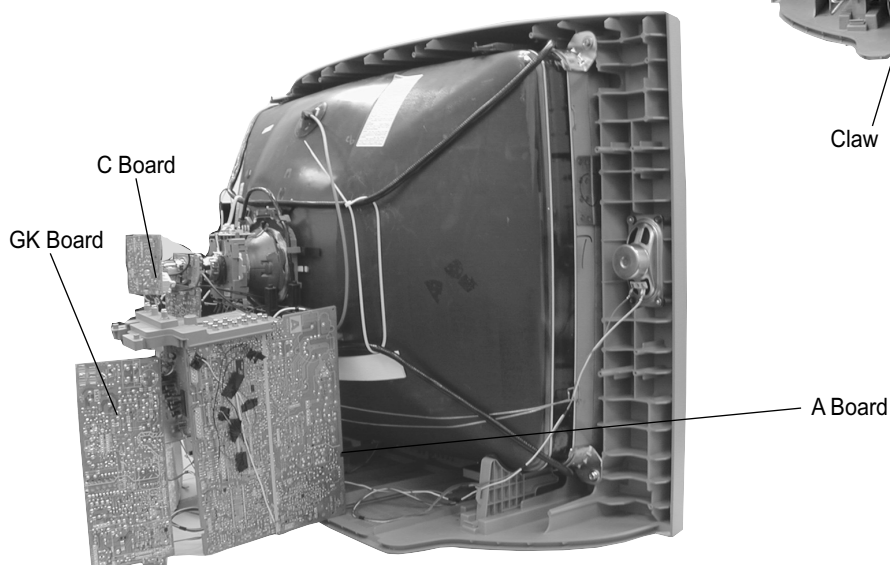
1-1. REAR COVER REMOVAL



1-2. CHASSIS ASSEMBLY REMOVAL



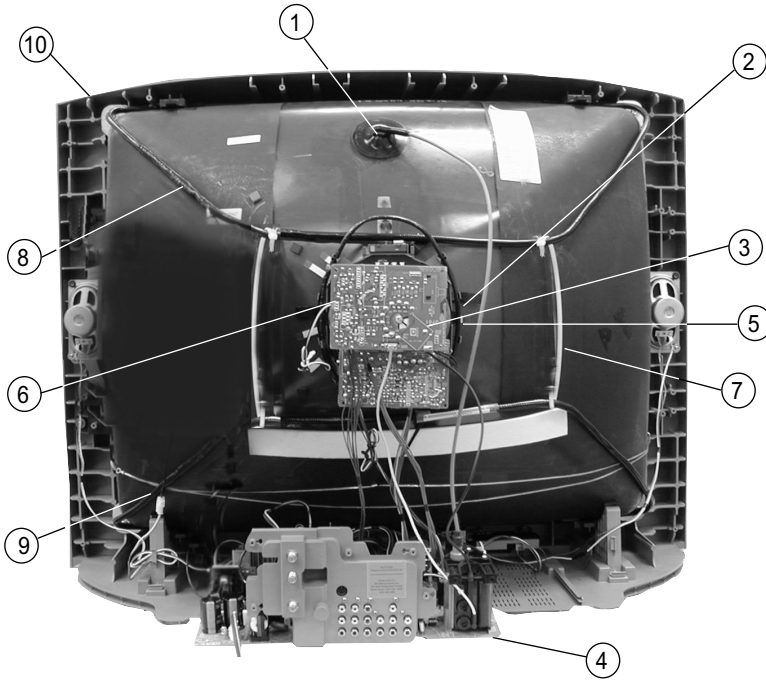
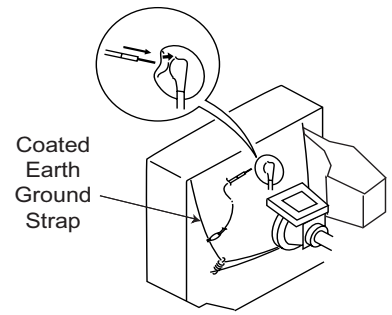
1-3. SERVICE POSITION



1-4. PICTURE TUBE REMOVAL

WARNING: BEFORE REMOVING THE ANODE CAP

High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT before attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.



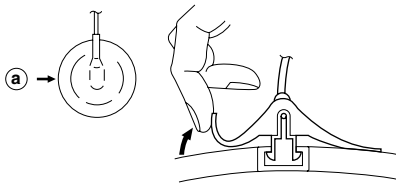
1. Discharge the anode of the CRT and remove the anode cap.
2. Unplug all interconnecting leads from the deflection yoke, neck assembly, degaussing coils and CRT grounding strap.
3. Remove the C Board from the CRT.
4. Remove the chassis assembly.
5. Loosen the neck assembly fixing screw and remove.
6. Loosen the deflection yoke fixing screw and remove.
7. Place the set with the CRT face down on a cushion and remove the degaussing coil holders.
8. Remove the degaussing coils.
9. Remove the CRT grounding strap and spring tension devices.
10. Unscrew the four CRT fixing screws [located on each CRT corner] and remove the CRT [Take care not to handle the CRT by the neck].

ANODE CAP REMOVAL PROCEDURE

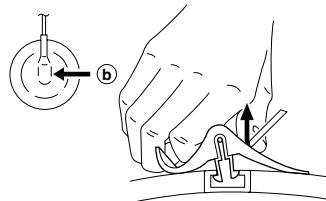
WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT before attempting to remove the anode cap. After removing the anode cap, short circuit to either the metal chassis, CRT shield, or carbon painted on the CRT.

NOTE: After removing the anode cap, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield or carbon painted on the CRT.

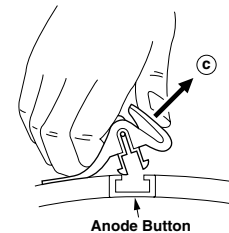
REMOVAL PROCEDURES



Turn up one side of the rubber cap in the direction indicated by arrow a .



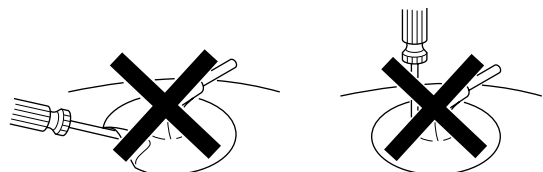
Use your thumb to pull the rubber cap firmly in the direction indicated by arrow b .



When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow c .

HOW TO HANDLE AN ANODE CAP

1. Do not use sharp objects which may cause damage to the surface of the anode cap.
2. To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.
3. Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



SECTION 2: SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed. These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch should be set as follows unless otherwise noted:

PICTURE CONTROL: normal
BRIGHTNESS CONTROL: normal

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G2)/White Balance

Test Equipment Required:

1. Color Bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital Multimeter
5. Oscilloscope
6. CRT Analyzer

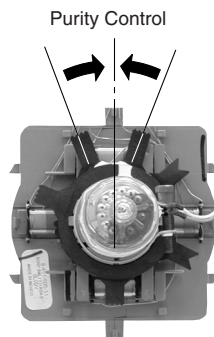
2-1. BEAM LANDING

Preparation:

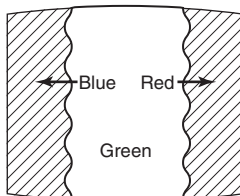
- Input a white pattern signal.
- Face the picture tube in an East or West direction to reduce the influence of geomagnetism.

NOTE: Do not use the hand degausser; it magnetizes the CRT .

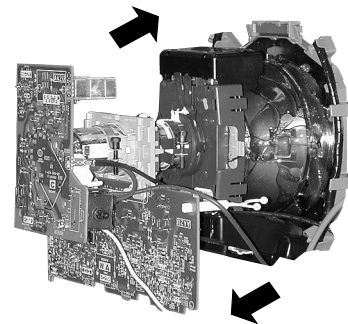
1. Input white pattern from pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown below:



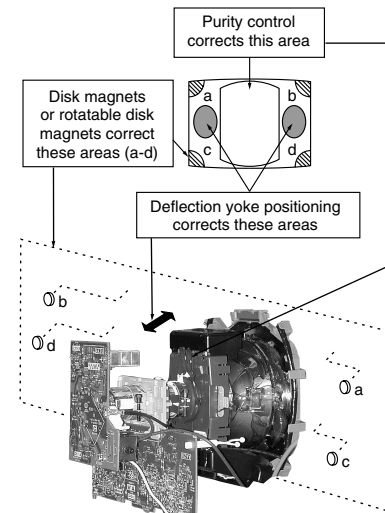
3. Input green pattern from pattern generator.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are even on both sides.



5. Move the deflection yoke forward, and adjust so that the entire screen becomes green.



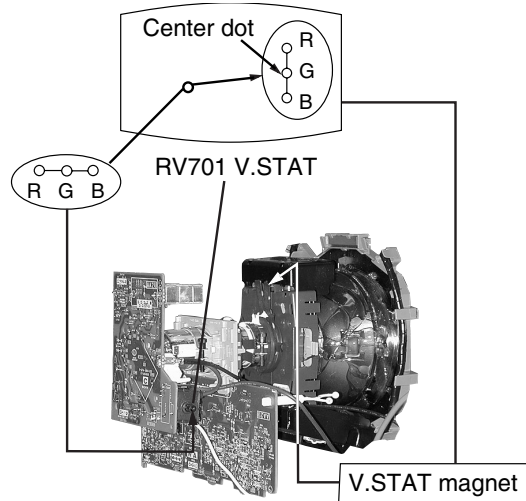
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corner is not right, adjust by using the disk magnets.



2-2. CONVERGENCE

Preparation:

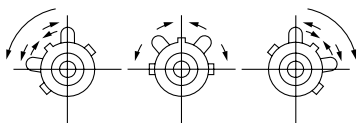
- Perform FOCUS, V. LIN and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Input dot pattern.



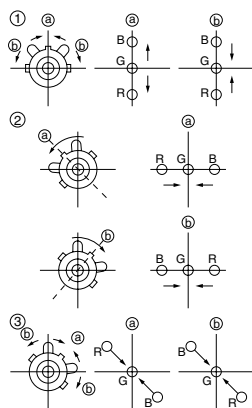
Vertical and Horizontal Static Convergence

1. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen (Vertical movement).

Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



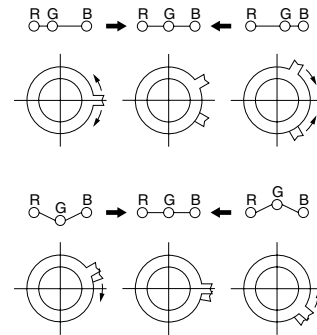
2. When the V. STAT magnet is moved in the direction of arrow a and b, red, green, and blue dots move as shown below:



Operation of BMC (Hexapole) Magnet

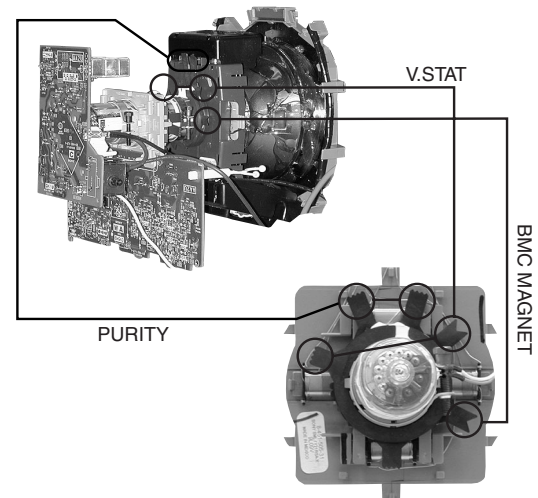
The respective dot positions resulting from moving each magnet interact, so perform adjustment while tracking.

1. Use the V. STAT tabs to adjust the red, green, and blue dots so they line up at the center of the screen (move the dots in a horizontal direction).



Y Separation Axis Correction Magnet Adjustment

1. Input cross-hatch pattern, adjust PICTURE to minimum and BRIGHTNESS to normal.
2. Adjust the deflection yoke upright so it touches the CRT.
3. Adjust so that the Y separation axis correction magnet on the neck assembly is symmetrical from top to bottom (open state).

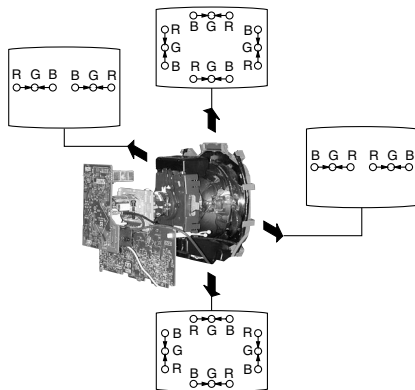


4. Return the deflection yoke to its original position.

Dynamic Convergence Adjustment

Before starting, perform Vertical and Horizontal Static Convergence Adjustment.

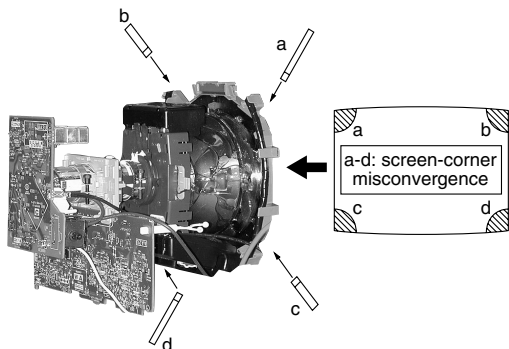
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below:



4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

Screen-corner Convergence

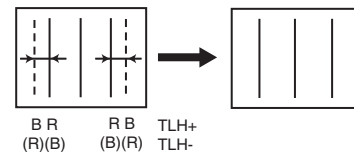
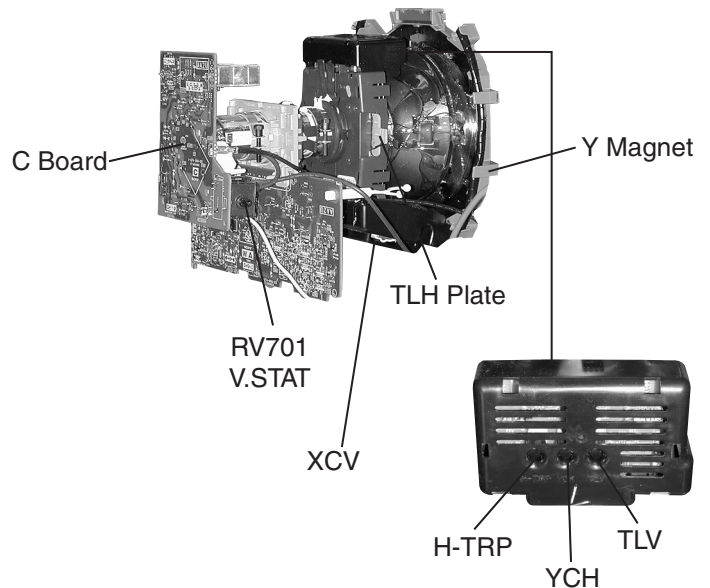
1. Affix a permalloy assembly corresponding to the misconverged areas:



TLH Plate Adjustment

Preparation:

- Input crosshatch pattern.
- Adjust Picture Quality to standard, Picture and Brightness to 50%, and Other to standard.
- Adjust the Horizontal Convergence of red and blue dots by tilting the TLH plate on the deflection yoke.

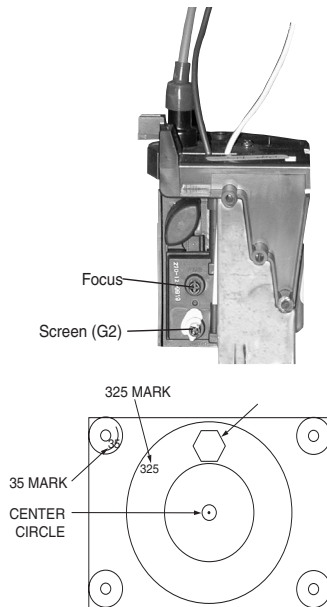


1. Adjust XCV core to balance X axis.
2. Adjust YCH VR to balance Y axis.
3. Adjust vertical red and blue convergence with V.TILT (TLV VR.) Perform adjustments while tracking items 1 and 2.
4. Adjust Y MAGNET to correct V.BOW Geometry Distortion.
5. Adjust H-TRP to correct H.Trapezoid Geometry Distortion.

After adjusting items 4 and 5, confirm overall geometry again.

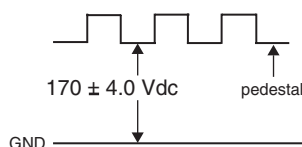
2-3. FOCUS

1. Input monoscope signal.
2. Set user controls to normal.
3. Set video mode to STANDARD.
4. Set the PICTURE to maximum.
5. Adjust at 325 Mark for best center/corner focus balance.
6. Receive an entire white signal. Make sure Magenta Ring is at an acceptable level.



2-4. SCREEN (G2)

1. Input dot pattern from the pattern generator.
2. Set the user controls to NORMAL.
3. Attach the G2-Jig to the C Board.
4. Adjust RCUT, GCUT, BCUT, and SBRT in service mode with an oscilloscope so that voltages on the red, green, and blue cathodes are $170 \pm 4.0\text{Vdc}$.
5. Observe the screen and adjust SCREEN (G2) VR to obtain the faintly visible background of dot signal.
6. Push the TEST + JUMP (+ Channel) to cut off the signal. The screen should be bright or dark. Brightness of raster must be increased when adjusting.
7. Adjust screen VR until the screen is slightly cut off, or scarcely lights up. A signal cannot be seen when the brightness of the raster is high.
8. Push the JUMP again to release the cut off.



2-5. WHITE BALANCE ADJUSTMENTS

| Adj. | NO. | Disp. | Item | All Models |
|---------|-----|-------|---------------|------------|
| VID_ADJ | 0 | RDRV | Red Drive | 41 |
| VID_ADJ | 1 | GDRV | Green Drive | 32 |
| VID_ADJ | 2 | BDRV | Blue Drive | 29 |
| VID_ADJ | 3 | RCUT | Red Cut-off | 31 |
| VID_ADJ | 4 | GCUT | Green Cut-off | 14 |
| VID_ADJ | 5 | BCUT | Blue Cut-off | 17 |
| VP2 | 4 | SBRT | Sub Bright | 87 |


1. Set program palette to STANDARD and push RESET.
2. Input an entire white signal.
3. Set to Service Adjustment Mode.
4. Set the PICTURE and BRIGHT to minimum.
5. Adjust with SBRT if necessary.
6. Set RCUT to "14".
7. Select GCUT and BCUT with **[3]** and **[5]**.
8. Adjust by pressing **[1]** and **[4]** for the best white balance.
9. Set the PICTURE and BRIGHT to maximum.
10. Select GDRV and BDRV with **[3]** and **[5]**.
11. Adjust with 3 and 6 for the best white balance.
12. Write into the memory by pressing **[3]** then **[5]**.
13. Repeat steps 1-12 for GDR4, BDR4, GCU4 and BCU4 using Video 4 input.



* Use values from Sub Contrast Adjustments

White balance should be adjusted after Sub Contrast because RDRV is also used in Sub Contrast Adjustment. (See page 25).

SECTION 3: SAFETY RELATED ADJUSTMENTS

3-1. R530, R531 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

Always perform the following adjustments when replacing the following components marked with a  mark on the schematic diagram:

| Part Replaced () | Adjustment () |
|---|--|
| A BOARD: R550, T503, T504, D519, IC501, R533, D521, R532, D520, C531, R529, R530, R531, C532 GK BOARD: IC600, PH602 | HV HOLD DOWN R530, R531 |


Preparation before Confirmation

1. Using a Variac, apply AC input voltage: 120 +/- 2.0 VAC.
2. Turn the POWER switch ON.
3. Input a white signal and set the PICTURE and BRIGHT controls to maximum.
4. Confirm that the voltage of more than 23.0 VDC appears between TP85 and ground on the A Board.

Hold-Down Operation Confirmation

1. Connect the current meter between Pin 11 of the FBT (T503) and the PWB land where Pin 11 would normally attach. (See Figure 1).
2. Input a dot signal and set PICTURE and BRIGHTNESS to minimum: IABL = 2175 + 100/-325 μ A.
3. Confirm the voltage of A Board TP91 is 135 \pm 1.5 VDC.
4. Connect the digital voltmeter and the DC power supply to TP85 and ground. (See Figure 1)
5. Increase the DC power voltage gradually until the picture blanks out.
6. Turn DC power source off immediately.
7. Read the digital voltmeter indication (standard = 27.24 + 0.0/- 0.1 VDC).
8. Input a white signal and set PICTURE and BRIGHTNESS to maximum: IABL = 2175 + 100/-325 μ A.
9. Repeat steps 4 to 7.

Hold-Down Readjustment

If the setting indicated in Step 2 of Hold-Down Operation Confirmation cannot be met, readjustment should be performed by altering the resistance value of R530, R531 component marked with .

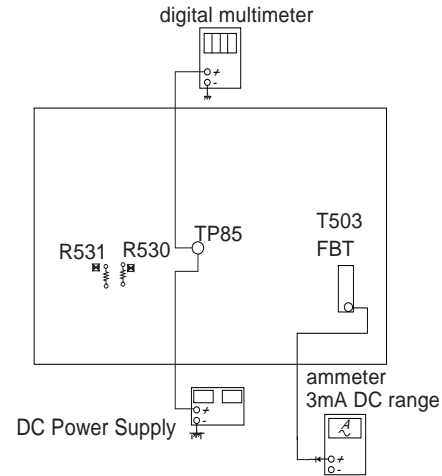



Figure 1

3-2. B+ VOLTAGE CONFIRMATION AND ADJUSTMENTS

Always perform the following adjustments when replacing the following components, which are marked with  on the schematic diagram on the GK Board:

GK BOARD: IC600, PH602

1. Using a Variac, apply AC input voltage: 130 + 2.0/-0.0 VAC
2. Input a monoscope signal.
3. Set the PICTURE control and the BRIGHT control to minimum.
4. Confirm the voltage on A Board between TP23 and ground is less than 136.5 VDC.
5. If step 4 is not satisfied, replace R530 and R531 on A Board and repeat the above steps.

SECTION 4: CIRCUIT ADJUSTMENTS

ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

Use the Remote Commander (RM-Y180) to perform the circuit adjustments in this section.

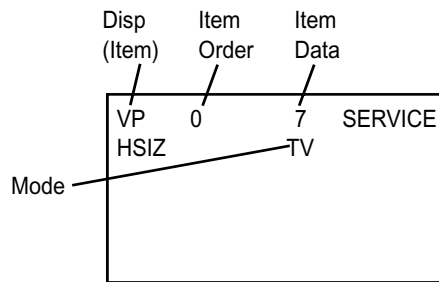
Test Equipment Required: 1. Pattern generator 2. Frequency counter 3. Digital multimeter 4. Audio oscillator

4-1. SETTING SERVICE ADJUSTMENT MODE

- Standby mode (Power off).
- Press the following buttons on the remote commander within a second of each other:

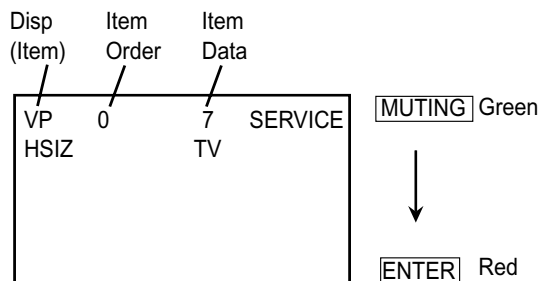
DISPLAY → Channel **5** → Sound Volume **+** → Power

Service Adjustment Mode In

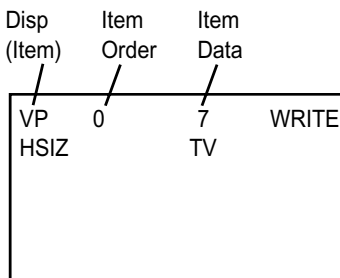


- The CRT displays the item being adjusted.
- Press **1** or **2** on the Remote Commander to select the item.
- Press **3** or **6** on the Remote Commander to change the data.
- Press **MUTING** then **ENTER** to save into the memory.

Service Adjustment Mode Memory



- Press **8** then **ENTER** on the Remote Commander to initialize.

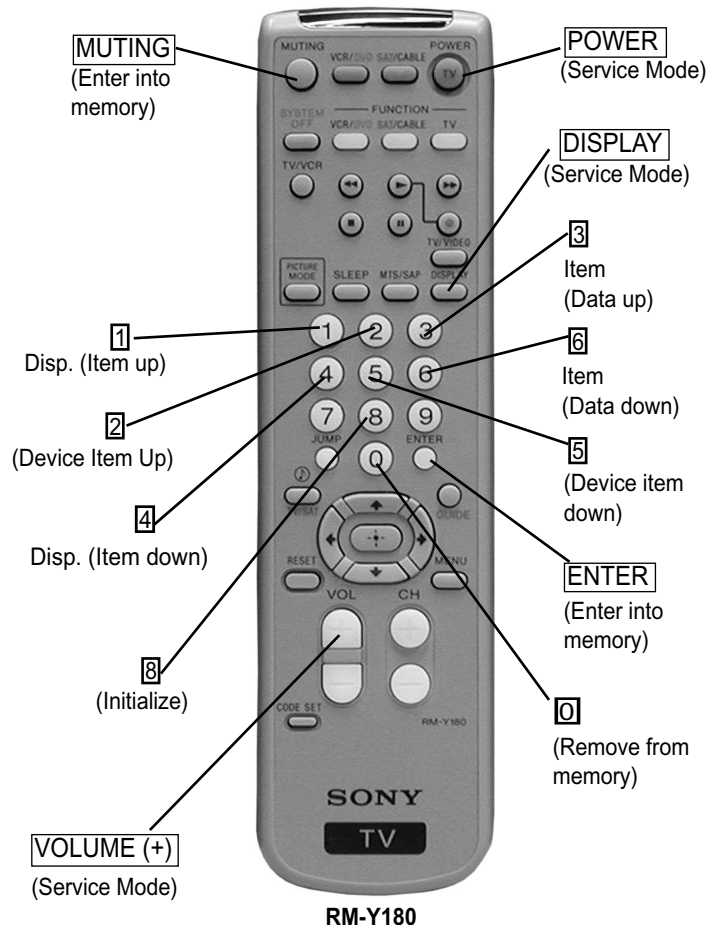


- DO NOT turn off set until SERVICE appears.

4-2. MEMORY WRITE CONFIRMATION METHOD

- After adjustment, pull out the plug from the AC outlet, then replace the plug in the AC outlet again.
- Turn the power switch ON and set to Service Mode.
- Call the adjusted items again to confirm they were adjusted.

4-3. REMOTE ADJUSTMENT BUTTONS AND INDICATORS



4-4. SERVICE DATA LISTS

Non-Volatile Memory (NVM) Reference for BA5D Service List

| Service Group | No. | Name | Description | Common | | |
|---------------|-----|------|------------------------------------|------------|----------|-----------|
| | | | | Slave Addr | Sub Addr | Init Data |
| VERSION | 0 | VER | Microprocessor version information | = | = | 0 |

| Service Group | No. | Name | Fix / Var | Description | Common | | | | NTSC / PAL-M | | | PAL-N | | |
|---------------|-----|------|-----------|--|------------|----------|----------|----------|--------------|----------|------|------------|----------|------|
| | | | | | Slave Addr | Sub Addr | Fix Data | Var Data | Slave Addr | Sub Addr | Data | Slave Addr | Sub Addr | Data |
| VP1 | 0 | HSIZ | Var | H SIZE (11 / 2-7) | | | | | A4 | A8 | | A4 | B4 | |
| | 1 | HPOS | Var | HPOS (12 / 2-7) | | | | | A4 | A9 | | A4 | B5 | |
| | 2 | VBOW | Var | AFC BOW (16 / 4-7) | | | | | A4 | AE | | A4 | BA | |
| | 3 | VANG | Var | AFC ANGLE (16 / 0-3) | | | | | A4 | AE | | A4 | BA | |
| | 4 | VTRP | Var | TRAPEZIUM (20 / 3-7) | | | | | A4 | AF | | A4 | BB | |
| | 5 | HTRP | Var | H. TRAPEZOID (15 / 4-7) | | | | | A4 | AD | | A4 | B9 | |
| | 6 | TROT | Fix | TILT ROTATION (0-63) | | | | | A4 | A4 | | A4 | B0 | |
| | 7 | PAMP | Var | PIN AMP (13 / 2-7) | | | | | A4 | AA | | A4 | B6 | |
| | 8 | UPIN | Var | UP-CPIN (14 / 2-7) | | | | | A4 | AB | | A4 | B7 | |
| | 9 | LPIN | Var | LO-CPIN (1C / 2-7) | | | | | A4 | AC | | A4 | B8 | |
| | 10 | VSIZ | Var | V SIZE (0E / 2-7) | | | | | A4 | A5 | | A4 | B1 | |
| | 11 | VPOS | Var | V POSITION (0E / 2-7) | | | | | A4 | A6 | | A4 | B2 | |
| | 12 | VLIN | Var | V LINEARITY (10 / 0-3) | | | | | A4 | A7 | | A4 | B3 | |
| | 13 | SCOR | Var | S CORRECTION (10 / 4-7) | | | | | A4 | A7 | | A4 | B3 | |
| | 14 | VZOM | Fix | 16:9 CRT Z Mode on/off | A4 | 85 | | | | | | | | |
| | 15 | EHT | Fix | Vertical High-Voltage Compensation | A4 | 80 | | | | | | | | |
| | 16 | ASP | Fix | Aspect Ratio control (4:3 Mode) | A4 | FB | 47 | | | | | | | |
| | 17 | ASP1 | Fix | Aspect Ratio control (16:9 Mode) | A4 | FC | 47 | | | | | | | |
| | 18 | SCRL | Fix | 16:9 CRT Z Mode Trans. Scroll | A4 | 86 | | | | | | | | |
| | 19 | HBLK | Fix | Horizontal Blanking on/off | A4 | 85 | | | | | | | | |
| | 20 | LBLK | Fix | Left Blanking Adjustment | A4 | 80 | | | | | | | | |
| | 21 | RBLK | Fix | Righth Blanking Adjustment | A4 | 81 | | | | | | | | |
| | 22 | HDW | Fix | Horizontal Drive Pulse Width | A4 | 85 | 1 | | | | | | | |
| | 23 | EWDC | Fix | "Parabola" EW, D.C. Adjustment | A4 | 88 | 0 | | | | | | | |
| | 24 | LVLN | Fix | Lower Screen BTM Vertical Line Adj. | A4 | 81 | | | | | | | | |
| | 25 | UVLN | Fix | Upper Screen BTM Vertical Line Adj. | A4 | 82 | | | | | | | | |
| | 26 | INTL | Fix | INTERLACE | A4 | 84 | 0 | | | | | | | |
| | 27 | HOSC | Fix | Horizontal VCO Oscillation Freq. | A4 | 82 | 7 | | | | | | | |
| | 28 | VSS | Fix | Vertical Sync Slice Level | A4 | 84 | 0 | | | | | | | |
| | 29 | HSS | Fix | Horizontal Sync Slice Level | A4 | 88 | 0 | | | | | | | |
| | 30 | HMSK | Fix | For Macro Vision | A4 | 88 | 0 | | | | | | | |
| | 31 | VTMS | Fix | Select Signal VTIM Pin | A4 | 85 | 0 | | | | | | | |
| | 32 | TCMD | Fix | Vertical Count Down Mode Switching (for TV) | A4 | 8C | 1 | | | | | | | |
| | 33 | VCMD | Fix | Vertical Count Down Mode Switching (for Video) | A4 | 8D | 3 | | | | | | | |
| | 34 | AFC | Fix | AFC Loop Gain Switching | A4 | 86 | 0 | | | | | | | |
| | 35 | FIFR | Fix | Field Frequency | A4 | 87 | 1 | | | | | | | |
| | 36 | VBLK | Fix | VBLKW | A4 | 88 | 0 | | | | | | | |
| | 37 | HTSW | Fix | H-Trap Switch : NEW | A4 | 88 | | | | | | | | |

SERVICE DATA LISTS

| Service Group | No. | Name | Fix / Var | Description | Common | | | | NTSC | | | PAL-M | | | PAL-N | | |
|---------------|-----|------|-----------|----------------------------------|------------|----------|----------|----------|------------|----------|------|------------|----------|------|------------|----------|------|
| | | | | | Slave Addr | Sub Addr | Fix Data | Var Data | Slave Addr | Sub Addr | Data | Slave Addr | Sub Addr | Data | Slave Addr | Sub Addr | Data |
| VP2 | 0 | REFP | Fix | REFP | A4 | 88 | 0 | | | | | | | | | | |
| | 1 | JPSW | Fix | Jump SW | = | = | | | | | | | | | | | |
| | 2 | SHUE | Var | Sub HUE adjustment | A4 | 8C | | | | | | | | | | | |
| | 3 | SCOL | Var | Sub COLOR adjustment | | | | | A4 | 8E | | A4 | 90 | 7 | A4 | 92 | |
| | 4 | SBRT | Var | Sub BRIGHTNESS adjustment | A4 | 87 | | | | | | | | | | | |
| | 5 | AXPL | Fix | Axis PAL | A4 | 89 | 0 | | | | | | | | | | |
| | 6 | AXNT | Fix | Axis NTSC | A4 | 89 | 1 | | | | | | | | | | |
| | 7 | CBPF | Fix | Chroma BPF on/off | A4 | 89 | 1 | | | | | | | | | | |
| | 8 | CTRP | Fix | Y TRAP FILTER on/off | = | = | | | | | | | | | | | |
| | 9 | COFF | Fix | Color On/off | = | = | | | | | | | | | | | |
| | 10 | KOFF | Fix | Set Color Killer | A4 | 89 | 0 | | | | | | | | | | |
| | 11 | SSHP | Fix | Sub SHARPNESS | A4 | 83 | | | | | | | | | | | |
| | 12 | TSPF | Fix | SHARPNESS Circuit Fo (for TV) | A4 | 8C | | | | | | | | | | | |
| | 13 | VSPF | Fix | SHARPNESS Circuit Fo (for Video) | A4 | 8D | | | | | | | | | | | |
| | 14 | PREL | Fix | Pre-Shoot/ Over-Shoot | A4 | 89 | 1 | | | | | | | | | | |
| | 15 | ABLM | Fix | ABL Mode Switch | A4 | 89 | 1 | | | | | | | | | | |
| | 16 | VTH | Fix | ABL CD VHT Switching | = | = | | | | | | | | | | | |
| | 17 | YDEL | Fix | Y Delay Time Control | A4 | 84 | | | | | | | | | | | |
| | 18 | NCOL | Fix | No Color ID | A4 | 85 | | | | | | | | | | | |
| | 19 | FSC | Fix | FSC Out on/off | A4 | 85 | 1 | | | | | | | | | | |
| | 20 | KID | Fix | Killer ID Control on/off | A4 | 85 | 0 | | | | | | | | | | |

| Service Group | No. | Name | Fix / Var | Description | Common | | | | NTSC | | | PAL-M | | | PAL-N | | |
|---------------|-----|------|-----------|--------------------------------|------------|----------|----------|----------|------------|----------|------|------------|----------|------|------------|----------|------|
| | | | | | Slave Addr | Sub Addr | Fix Data | Var Data | Slave Addr | Sub Addr | Data | Slave Addr | Sub Addr | Data | Slave Addr | Sub Addr | Data |
| VID_ADJ | 0 | RDRV | Var | R DRIVE (0A / 7-2) | A4 | 9E | 41 | | | | | | | | | | |
| | 1 | GDRV | Var | G DRIVE (0B / 7-2) | A4 | 9F | | | | | | | | | | | |
| | 2 | BDRV | Var | B DRIVE (0C / 7-2) | A4 | A0 | | | | | | | | | | | |
| | 3 | RCUT | Var | R CUT OFF (07 / 7-2) | A4 | A1 | 31 | | | | | | | | | | |
| | 4 | GCUT | Var | G CUT OFF (08 / 7-2) | A4 | A2 | | | | | | | | | | | |
| | 5 | BCUT | Var | B CUT OFF (09 / 7-2) | A4 | A3 | | | | | | | | | | | |
| | 6 | SCON | Var | Sub Contrast adjusment | A4 | 8A | | | | | | | | | | | |
| | 7 | CHUE | Var | Sub HUE adjustment for TV | A4 | 94 | 16 | | | | | | | | | | |
| | 8 | CCOL | Var | Sub COLOR adjustment for TV | | | | | A4 | 8F | 18 | A4 | 91 | 18 | A4 | 93 | 23 |
| | 9 | UOFS | Var | YUV U offset | A4 | 8B | | | | | | | | | | | |
| | 10 | VOFS | Var | YUV V offset | A4 | 8B | | | | | | | | | | | |
| | 11 | RON | Fix | R ON (01 / 3) | = | = | | | | | | | | | | | |
| | 12 | GON | Fix | G ON (01 / 2) | = | = | | | | | | | | | | | |
| | 13 | BON | Fix | B ON (01 / 1) | = | = | | | | | | | | | | | |
| | 14 | HUEV | Var | Sub HUE adjustment for Video | A4 | 8D | | | | | | | | | | | |
| | 15 | COLV | Var | Sub COLOR adjustment for Video | | | | | A4 | 8E | | A4 | 90 | | A4 | 92 | |

SERVICE DATA LISTS

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|----------------|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| COL_TMP | 0 | GDOF | Fix | G DRIVE Offset | A4 | 9A | 4 |
| | 1 | BDOF | Fix | B DRIVE Offset | A4 | 9B | 15 |
| | 2 | GCOF | Fix | G CUT Offset | A4 | 9C | 7 |
| | 3 | BCOF | Fix | B CUT Offset | A4 | 9D | 14 |
| | 4 | DCOL | Fix | Dinamic Color | = | = | |

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|--------------------------------------|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| PIC_IMP | 0 | BLAD | Fix | Black area detect (01 / 6-7) | A4 | 09 | 0 |
| | 1 | SRTS | Fix | SRT level (01 / 4-5) | A4 | 09 | 3 |
| | 2 | YNR | Fix | YNR(01 / 2) | A4 | 09 | 1 |
| | 3 | GIRE | Fix | Gamma correction(01 / 0-1) | A4 | 09 | 3 |
| | 4 | DAC1 | Fix | DAC1(02 / 7) | A4 | 0A | 0 |
| | 5 | DAC2 | Fix | DAC2(02 / 6) | A4 | 0A | 0 |
| | 6 | VMGA | Fix | VM on 1226 (02/5-4) | A4 | 0A | 0 |
| | 7 | GCUR | Fix | Gamma curve(02 / 2) | A4 | 0A | 1 |
| | 8 | BLKC | Fix | Black Compensation (02 / 1) | A4 | 0A | 1 |
| | 9 | TEST | Fix | TEST(03 / 6-7) | A4 | 0B | 3 |
| | 10 | RS | Fix | RS (03 / 3-5) | A4 | 0B | 0 |
| | 11 | RTC | Fix | RTC(03 / 0-2) | A4 | 0B | 2 |
| | 12 | APAC | Fix | APAC | A4 | 0B | 0 |
| | 13 | SRTH | Fix | SRT bit for Dynablack = High | A4 | 5C | 1 |
| | 14 | SRTL | Fix | SRT bit for Dynablack = Low | A4 | 5D | 1 |
| | 15 | SRT0 | Fix | SRT bit for Dynablack = Off | A4 | 5E | 0 |
| | 16 | SHPH | Fix | Sharpness level for Dynablack = High | A4 | 5C | 57 |
| | 17 | SHPL | Fix | Sharpness level for Dynablack = Low | A4 | 5D | 43 |
| | 18 | SHPO | Fix | Sharpness level for Dynablack = Off | A4 | 5E | 0 |

| Service Group | No. | Name | Fix / Var | Description | Palette = VIVID | | | Palette = STANDARD | | | Palette = MOVIE | | | Palette = SPORTS | | |
|---------------|-----|------|-----------|--|-----------------|----------|----------|--------------------|----------|----------|-----------------|----------|----------|------------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data | Slave Addr | Sub Addr | Fix Data | Slave Addr | Sub Addr | Fix Data | Slave Addr | Sub Addr | Fix Data |
| PALETTE | 0 | VPIC | Var | User picture setting 0:min, 63: max | A4 | 5F | 63 | A4 | 65 | 50 | A4 | 6B | 38 | A4 | 71 | 63 |
| | 1 | VBRT | Var | User brightness setting 0:min, 63: max | A4 | 60 | 31 | A4 | 66 | 31 | A4 | 6C | 31 | A4 | 72 | 31 |
| | 2 | VCOL | Var | User color setting 0:min, 63: max | A4 | 61 | 35 | A4 | 67 | 31 | A4 | 6D | 31 | A4 | 73 | 40 |
| | 3 | VSHP | Var | User sharpness setting 0:min, 63: max | A4 | 62 | 31 | A4 | 68 | 31 | A4 | 6E | 34 | A4 | 74 | 31 |
| | 4 | VVM | Var | 0: OFF, 1: Low, 2: High, 3: N/A | A4 | 5F | 2 | A4 | 65 | 1 | A4 | 6B | 0 | A4 | 71 | 2 |
| | 5 | VTRI | Var | 0: Cool, 1: Nutral, 2: Warm, 3: N/A | A4 | 60 | 0 | A4 | 66 | 1 | A4 | 6C | 2 | A4 | 72 | 0 |
| | 6 | VGMA | Var | 0: OFF, 1: Low, 2: Mid, 3: Max | A4 | 63 | 2 | A4 | 69 | 2 | A4 | 6F | 2 | A4 | 75 | 2 |
| | 7 | VNRM | Var | 0: 3D, 1: 2D | A4 | 61 | 0 | A4 | 67 | 0 | A4 | 6D | 0 | A4 | 73 | 0 |
| | 8 | VYDC | Var | DC Transmission Ratio 0,1: 100%, 2: 92%, 3: 85 | A4 | 62 | 3 | A4 | 68 | 3 | A4 | 6E | 2 | A4 | 74 | 3 |
| | 9 | VVEN | Var | Vertoca; Enhancement | A4 | 63 | 5 | A4 | 69 | 3 | A4 | 6F | 3 | A4 | 75 | 5 |
| | 10 | VHK0 | Var | Horizontal Peaking 0:On, 1:Off | A4 | 61 | 0 | A4 | 67 | 0 | A4 | 6D | 0 | A4 | 73 | 0 |
| | 11 | VDBK | Var | User Dynablack 0: OFF, 1: Low, 2: High, 3: N/A | A4 | 63 | 2 | A4 | 69 | 1 | A4 | 6F | 1 | A4 | 75 | 1 |
| | 12 | VYPL | Var | Y-Peaking Limit | A4 | 64 | 1 | A4 | 6A | 0 | A4 | 70 | 0 | A4 | 76 | 1 |

SERVICE DATA LISTS

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|-------------------------------------|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| 3L_COMB | 0 | FUNN | Fix | Function (0 / 7-6) for NTSC | A4 | 3C | 3 |
| | 1 | FUNP | Fix | Function (0 / 7-6) for PAL-N, PAL-M | A5 | 3C | 3 |
| | 2 | DRNG | Fix | DRANG (0 / 2) | A4 | 3C | 0 |
| | 3 | YCSM | Fix | Y/C Sep Mode (0 / 1-0) | A4 | 3C | 0 |
| | 4 | CNRK | Fix | CNRK (1 / 7-6) | A4 | 3D | 1 |
| | 5 | CNRL | Fix | CNR Lim (1 / 5-4) | A4 | 3D | 1 |
| | 6 | CLPF | Fix | C-LPF(1 / 3) | A4 | 3D | 1 |
| | 7 | SLPF | Fix | SeLC-LPF(1 / 2) | A4 | 3D | 0 |
| | 8 | MODE | Fix | Mode1 (1 / 1) | A4 | 3D | 0 |
| | 9 | YPG | Fix | Y - Peaking Gain (2 / 7-6) | A4 | 3E | 3 |
| | 10 | PDSC | Fix | Pds. Clip (2 / 3) | A4 | 3E | 0 |
| | 11 | YLPF | Fix | Y-LPF(2 / 2) | A4 | 3E | 1 |
| | 12 | VENL | Fix | V-Emph N.L (3 / 4-2) | A4 | 3F | 4 |
| | 13 | VEC | Fix | V - Emph Core (3 / 1-0) | A4 | 3F | 3 |

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|--------------------|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| 3D_COMB | 0 | COUT | Fix | COUTS(00 / 2-3) | A4 | 21 | 3 |
| | 1 | YAPS | Fix | YAPS(00 / 0-1) | A4 | 21 | 1 |
| | 2 | NSDS | Fix | NSDS(01 / 4-5) | A4 | 22 | 0 |
| | 3 | MSS | Fix | MSS(01 / 2-3) | A4 | 22 | 0 |
| | 4 | KILS | Fix | KILS (01 / 1-0) | A4 | 22 | 1 |
| | 5 | DYC | Fix | DYCOS (02 / 7-6) | A4 | 23 | 2 |
| | 6 | EXAD | Fix | EXADINS(02 / 5) | A4 | 23 | 0 |
| | 7 | EXCS | Fix | EXCSS(02 / 1-0) | A4 | 23 | 1 |
| | 8 | CPP | Fix | CPP(03 / 6) | A4 | 24 | 0 |
| | 9 | HDP | Fix | HDP(03 / 3-5) | A4 | 24 | 6 |
| | 10 | CDL | Fix | CDL(03 / 0-2) | A4 | 24 | 6 |
| | 11 | DYCO | Fix | DYCOR(04 / 4-7) | A4 | 25 | 2 |
| | 12 | DYGA | Fix | DYGAIN(04 / 0-3) | A4 | 25 | 10 |
| | 13 | DCCO | Fix | DCCOR(05 / 4-7) | A4 | 26 | 2 |
| | 14 | DCGA | Fix | DCGAIN(05 / 0-3) | A4 | 26 | 9 |
| | 15 | YNRL | Fix | YNRLIM(06 / 4-5) | A4 | 27 | 1 |
| | 16 | CNRL | Fix | CNRLIM(06 / 0-1) | A4 | 27 | 1 |
| | 17 | ID1O | Fix | ID1ON(07 / 7) | A4 | 28 | 0 |
| | 18 | ID1W | Fix | ID1W0A1(07 / 6) | A4 | 28 | 0 |
| | 19 | ID1N | Fix | ID1W0A2(07 / 5) | A4 | 28 | 0 |
| | 20 | WSC | Fix | WSC(08 / 6-7) | A4 | 29 | 1 |
| | 21 | VTRH | Fix | VTRH(08 / 4-5) | A4 | 29 | 1 |
| | 22 | VTRR | Fix | VTRR(08 / 2-3) | A4 | 29 | 1 |
| | 23 | LDSR | Fix | LDSR(08 / 0-1) | A4 | 29 | 2 |
| | 24 | WSS | Fix | WSS (09 / 7) | A4 | 2A | 0 |
| | 25 | ID1E | Fix | ID1ECON (09 / 6) | A4 | 2A | 1 |
| | 26 | TT | Fix | TT (09 / 4 -5) | A4 | 2A | 0 |
| | 27 | FELC | Fix | FELCHK (09 / 3) | A4 | 2A | 1 |
| | 28 | TH | Fix | TH (09 / 1 -2) | A4 | 2A | 0 |
| | 29 | VAPG | Fix | VAPGAIN(0A / 5-7) | A4 | 2B | 3 |
| | 30 | VAPI | Fix | VAPINV(0A / 0-4) | A4 | 2B | 25 |

SERVICE DATA LISTS

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|--------------------|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| 3D_COMB | 31 | YPFT | Fix | YPFT(0B / 4-5) | A4 | 2C | 3 |
| | 32 | YPFG | Fix | YPFG(0B / 0-3) | A4 | 2C | 8 |
| | 33 | V1PS | Fix | V1PS(0C / 6-7) | A4 | 2D | 3 |
| | 34 | VEGS | Fix | VEGS(0C / 4-5) | A4 | 2D | 2 |
| | 35 | CC3N | Fix | CC3N(0C / 3) | A4 | 2D | 0 |
| | 36 | C0HS | Fix | C0HS(0C / 2) | A4 | 2D | 0 |
| | 37 | SEL2 | Fix | SELD2FH(0C / 0) | A4 | 2D | 1 |
| | 38 | SEL1 | Fix | SELD1FL(0D / 5) | A4 | 2E | 1 |
| | 39 | YHCO | Fix | YHCOR(10 / 6-7) | A4 | 31 | 0 |
| | 40 | YHCG | Fix | YHCGAIN(10 / 5) | A4 | 31 | 1 |
| | 41 | OVST | Fix | +OVST(10 / 3) | A4 | 31 | 0 |
| | 42 | CSHD | Fix | CSHDT(10 / 2) | A4 | 31 | 0 |
| | 43 | KCTT | Fix | KCTT(10 / 0-1) | A4 | 31 | 0 |
| | 44 | SHT | Fix | SHT(11 / 7-6) | A4 | 32 | 0 |
| | 45 | VCT | Fix | VCT(11 / 5) | A4 | 32 | 0 |
| | 46 | CGAT | Fix | CLKGAT (11 / 4) | A4 | 32 | 0 |
| | 47 | CG2D | Fix | CLK2D (11 / 3) | A4 | 32 | 1 |
| | 48 | CGGT | Fix | CLKGGT (11 / 2) | A4 | 32 | 0 |
| | 49 | CGEB | Fix | CLKGEB (11 / 1) | A4 | 32 | 0 |
| | 50 | CGT | Fix | CLKGT (11 / 0) | A4 | 32 | 0 |
| | 51 | HPLL | Fix | HPLLFS(12 / 7) | A4 | 33 | 1 |
| | 52 | BPLL | Fix | BPLLFS (12 / 6) | A4 | 33 | 0 |
| | 53 | FSCF | Fix | FSCFG(12 / 5) | A4 | 33 | 0 |
| | 54 | PLL | Fix | PLLFG(12 / 4) | A4 | 33 | 1 |
| | 55 | KILR | Fix | KILR(12 / 0-3) | A4 | 33 | 3 |
| | 56 | HSSL | Fix | HSSL(13 / 4-7) | A4 | 34 | 12 |
| | 57 | VSSL | Fix | VSSL(13 / 0-3) | A4 | 34 | 8 |
| | 58 | BGPS | Fix | BGPS(14 / 4-7) | A4 | 35 | 4 |
| | 59 | BGPW | Fix | BGPW(14 / 0-3) | A4 | 35 | 10 |
| | 60 | ADCL | Fix | ADCLKS(15 / 6-7) | A4 | 36 | 3 |
| | 61 | NSDW | Fix | NSDSW(15 / 4) | A4 | 36 | 1 |
| | 62 | HIZE | Fix | HIZEN (16 / 4) | A4 | 37 | 0 |
| | 63 | HCNT | Fix | HCNTFSYN (17 / 6) | A4 | 38 | 0 |

SERVICE DATA LISTS

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|--|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| PIP | 0 | PFRN | Fix | VCXO oscilation | A4 | 40 | 0 |
| | 1 | PRVS | Fix | HD/VD input synchronous mode selection | A4 | 40 | 1 |
| | 2 | PCON | Fix | PIP sub contrast control | A4 | 41 | 97 |
| | 3 | PUCO | Fix | PIP U level control | A4 | 42 | 5 |
| | 4 | PVCO | Fix | PIP V level control | A4 | 43 | 17 |
| | 5 | PHUE | Fix | PIP sub hue control | A4 | 57 | 12 |
| | 6 | PKIL | Fix | Color killer | A4 | 42 | 0 |
| | 7 | PSEP | Fix | C-sync sep input selection | A4 | 44 | 1 |
| | 8 | PDCN | Fix | Sub pic sync sep. Thershold setting | A4 | 44 | 3 |
| | 9 | PBGS | Fix | bgp position setting | A4 | 45 | 15 |
| | 10 | PDL0 | Fix | Y/C delay adjust (for video) | A4 | 46 | 11 |
| | 11 | PDL1 | Fix | Y/C delay adjust (for yuv) | A4 | 46 | 13 |
| | 12 | PBRT | Fix | Y bryghtness control | A4 | 48 | 25 |
| | 13 | PVP1 | Fix | V pedestal level for YUV | A4 | 49 | 0 |
| | 14 | PUP1 | Fix | U pedestal level for YUV | A4 | 49 | 0 |
| | 15 | PVP2 | Fix | V pedestal level for main w/ burst | A4 | 4A | 0 |
| | 16 | PUP2 | Fix | U pedestal level for main w/ burst | A4 | 4A | 0 |
| | 17 | PVP3 | Fix | V pedestal level for main w/o burst | A4 | 4B | 0 |
| | 18 | PUP3 | Fix | U pedestal level for main w/o burst | A4 | 4B | 0 |
| | 19 | PACS | Fix | 0D, 0Eh setting mode | A4 | 4C | 1 |
| | 20 | PSYS | Fix | Color system | = | = | |
| | 21 | PSDL | Fix | Sync delay control | A4 | 4C | 0 |
| | 22 | PCCL | Fix | YUV color level | A4 | 4D | 11 |
| | 23 | PCGA | Fix | Croma gain | A4 | 4D | 1 |
| | 24 | PAAF | Fix | Auto AFC | A4 | 4D | 1 |
| | 25 | PSU2 | Fix | For test | A4 | 4D | 0 |
| | 26 | PCVF | Fix | Internal 1H comb filter | A4 | 4D | 0 |
| | 27 | PBIT | Fix | Y clamp time constant | A4 | 4E | 0 |
| | 28 | PAFC | Fix | AFC time constant | A4 | 4E | 0 |
| | 29 | PACC | Fix | Color decoder amplitude | A4 | 4E | 21 |
| | 30 | PSDT | Fix | System automatic judgment | = | = | |
| | 31 | PBUR | Fix | VCXO mode selection | A4 | 4F | 0 |
| | 32 | PEVE | Fix | Main picture PAL-N | A4 | 4F | 0 |
| | 33 | PINW | Fix | Invert sub picture field definition | A4 | 4F | 0 |
| | 34 | PINR | Fix | Invert main picture field definition | A4 | 4F | 0 |
| | 35 | PVMD | Fix | Vertical display mode when pal-n | = | = | |
| | 36 | PREF | Fix | Main picture field fix | A4 | 4F | 0 |
| | 37 | PARE | Fix | Automatic 50/60 Hz judgement | A4 | 4F | 0 |
| | 38 | PBWD | Fix | BW det. Treshold setting | A4 | 50 | 1 |
| | 39 | PFRA | Fix | Freq. Adjustment for free run mode | A4 | 51 | 0 |
| | 40 | PPAL | Fix | Parameter setting for PAL-M judgment | A4 | 52 | 52 |
| | 41 | PHPO | Var | Sub picture h position | A4 | 58 | 3 |
| | 42 | PVPO | Fix | Sub picture v position | A4 | 59 | 22 |
| | 43 | PHTI | Fix | Display timing adjust | A4 | 44 | 6 |
| | 44 | PHAJ | Fix | Main/Sub switch delay control | A4 | 47 | 2 |
| | 45 | PBGY | Fix | Back ground Y level setting | A4 | 53 | 0 |
| | 46 | PCRO | Fix | Sub picture read mode | A4 | 54 | 0 |
| | 47 | PPAR | Fix | Thershold contol for ident judgement of sub | A4 | 50 | 1 |
| | 48 | PHPF | Fix | Y output HPF | A4 | 51 | 0 |
| | 49 | PFSC | Fix | FSC output | A4 | 43 | 0 |
| | 50 | PVCH | Fix | 15h,16h,17h, setting mode | A4 | 4C | 0 |
| | 51 | PVON | Fix | V-chip decode mode | A4 | 53 | 1 |
| | 52 | PVLN | Fix | V-chip data slicer line selection | A4 | 54 | 17 |
| | 53 | PVSB | Fix | V-chip data slicer start bit detection parameter | A4 | 55 | 64 |
| | 54 | PVLV | Fix | V-chip data slicer slice parameter | A4 | 56 | 130 |
| | 55 | SUSW | Fix | Sub-Unlock bit position switch | A4 | 59 | 0 |

SERVICE DATA LISTS

| Service Group | No. | Name | Fix / Var | Description | Slave Addr | Sub Addr | Fix Data | Init Data |
|---------------|-----|------|-----------|-------------------------|------------|----------|----------|-----------|
| AP | 0 | SBAL | Fix | Sub Balance | A8 | 41 | | 4 |
| | 1 | SBAS | Fix | Sub Bass | A8 | 43 | | 4 |
| | 2 | STRE | Fix | Sub Treble | A8 | 42 | | 0 |
| | 3 | SRL | Fix | Surround level | A8 | 44 | | 0 |
| | 4 | BBOH | Fix | Surround Off - BBE high | A8 | 45 | | 10 |
| | 5 | BBOL | Fix | Surround Off - BBE low | A8 | 45 | | 5 |
| | 6 | BBSH | Fix | Simulated - BBE high | A8 | 46 | | 0 |
| | 7 | BBSL | Fix | Simulated - BBE low | A8 | 46 | | 0 |
| | 8 | BBMH | Fix | Surround - BBE high | A8 | 47 | | 0 |
| | 9 | BBML | Fix | Surround - BBE low | A8 | 47 | | 0 |
| | 10 | BBGH | Fix | WOW - BBE high | A8 | 48 | | 6 |
| | 11 | BBGL | Fix | WOW - BBE low | A8 | 48 | | 9 |
| | 12 | BBTH | Fix | Trusurround - BBE high | A8 | 49 | | 7 |
| | 13 | BBTL | Fix | Trusurround - BBE low | A8 | 49 | | 8 |
| | 14 | VFIX | Fix | Audio output fix data | A8 | 4A | | 236 |
| | 15 | AGCL | Fix | AGC Level | A8 | 44 | | 2 |

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|------------------|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| CCD | 0 | DUM0 | Fix | Only for testing | = | = | |
| | 1 | VOSD | Fix | Only for testing | = | = | |

| Service Group | No. | Name | Fix / Var | Description | Common | | |
|---------------|-----|------|-----------|---|------------|----------|----------|
| | | | | | Slave Addr | Sub Addr | Fix Data |
| OP | 0 | DISP | Fix | OSD Display position | A4 | 06 | 28 |
| | 1 | RAMW | Fix | | = | = | |
| | 2 | ICMP | Fix | Comparison data to determine Non-interlace signal for OSD | A4 | 39 | 4 |
| | 3 | IPOR | Fix | 0:Even, 1: Odd, Other: do not change | A4 | 3A | 1 |
| | 4 | FAWD | Fix | 1: Forced to auto wide mode, 0:normal | A0 | 5D | 0 |
| | 5 | HCLW | Fix | H-Count Lower limit | A4 | 02 | 67 |
| | 6 | HCHG | Fix | H-Count Higher limit | A4 | 03 | 254 |
| | 7 | 9VTM | Fix | Delay for 9V check subsystem | A4 | 04 | 55 |
| | 8 | ZDET | Fix | Zero detect relay delay | A4 | 05 | 123 |

| Service Group | No. | Name | Fix / Var | Description | Slave Addr | Sub Addr | Var Data |
|---------------|-----|------|-----------|---------------------|------------|----------|------------|
| ID | 0 | ID0 | Fix | Model variation ID0 | A4 | 78 | SEE ID MAP |
| | 1 | ID1 | Fix | Model variation ID1 | A4 | 79 | SEE ID MAP |
| | 2 | ID2 | Fix | Model variation ID2 | A4 | 7A | SEE ID MAP |
| | 3 | ID3 | Fix | Model variation ID3 | A4 | 7B | SEE ID MAP |
| | 4 | ID4 | Fix | Model variation ID4 | A4 | 7C | SEE ID MAP |
| | 5 | ID5 | Fix | Model variation ID5 | A4 | 7D | SEE ID MAP |
| | 6 | ID6 | Fix | Model variation ID6 | A4 | 7E | SEE ID MAP |
| | 7 | ID7 | Fix | Model variation ID7 | A4 | 7F | SEE ID MAP |

To determine ID's value, ID map must be referred

4-5. ID MAP TABLE

| Model | Destination | ID-O | ID-1 | ID-2 | ID-3 | ID-4 | ID-5 | ID-6 | ID-7 |
|------------|-------------|------|------|------|------|------|------|------|------|
| KV-29FS105 | ARGENTINA | 55 | 31 | 201 | 194 | 46 | 0 | 0 | 80 |
| KV-29FS105 | BRAZIL | 63 | 31 | 201 | 194 | 46 | 0 | 0 | 80 |
| KV-34FS105 | ARGENTINA | 55 | 31 | 201 | 194 | 46 | 0 | 0 | 80 |
| KV-34FS105 | BRAZIL | 63 | 31 | 201 | 194 | 46 | 0 | 0 | 80 |
| KV-38FS105 | ARGENTINA | 55 | 31 | 201 | 194 | 46 | 0 | 0 | 80 |
| KV-38FS105 | BRAZIL | 63 | 31 | 201 | 194 | 46 | 0 | 0 | 80 |

4-6. A BOARD ADJUSTMENTS

H. Frequency (Free Run) Check

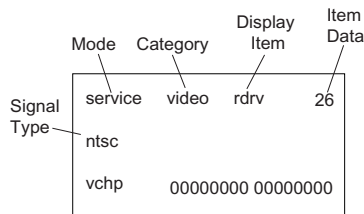
1. Input a TV mode (RF) with no signal.
2. Connect a frequency counter to base of Q501 (TP-25 H. DRIVE) on the A Board.
3. Check H. Frequency for $15734 \pm 400/200$ Hz.

V. Frequency (Free Run) Check

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter to TP-27 (V OUT) or CN501 pin ⑥ (V DY+) and ground on the A Board.
4. Check that V. Frequency shows 60 ± 5 Hz.

Subcontrast Adjustment (RDRV)

1. Input a color-bar signal and set the level to 75%.
2. Set in Standard mode.
3. Activate the Service Adjustment Mode. Set color min, pic max.
4. Set GON and BON items. Using [3] and [6] set each to the following values. Leave RON set to "1".

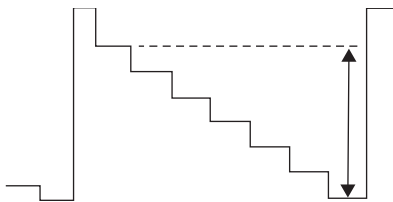


R ON: ON (1)

G ON: OFF (0)

B ON: OFF (0)

5. Connect an oscilloscope probe to C Board, CN705 pin 3 (Red Out) (TP35).
6. Select SCON with [1] and [4].
7. Adjust the value of SCON with [3] and [6] for $1.95 \pm 0.05V_{pp}$.



8. After adjusting SCON, if still out of spec, use RDRV register as a fine adjustment.
9. Reset GON and BON values to "1".

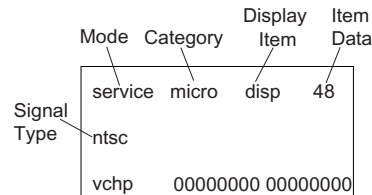
R ON: ON (1)

G ON: ON (1)

B ON: ON (1)
10. Press [MUTING] then [ENTER] to save into the memory.

Display Position Adjustment (DISP)

1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select DISP with [1] and [4].
4. Adjust values of DISP with [3] and [6] to adjust characters to the center.
5. Press [MUTING] then [ENTER] to save into the memory.
6. Check to see if the text is displayed on the screen.

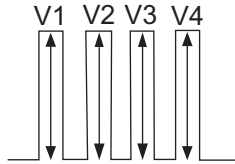


Sub Bright Adjustment (SBRT)

1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with [1] and [4].
5. Adjust the values of SBRT with [3] and [6] to obtain a faintly visible crosshatch.
6. Press [MUTING] then [ENTER] to save into the memory.

Sub Hue, Sub Color Adjustment (SHUE, SCOL)

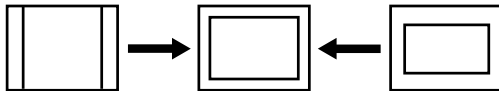
1. Input color-bar signal at 75%.
2. Activate the Service Adjustment Mode.
3. Set (PIC) to Max and (COL) to 50%.
4. Connect an oscilloscope probe to C Board, CN705Pin ④ Blue Out.
5. Select the SHUE and SCOL item with **[1]** and **[4]**.
6. While showing the SHUE item, adjust the waveform with **[1]** and **[4]** until the second and third bars show the same level ($V2 = V3 < 0.15V_{p-p}$).
7. While showing the SCOL item, adjust the waveform with **[3]** and **[6]** until the first and fourth bars show the same level ($V1 = V4 < 0.15V_{p-p}$). Increase 1 step after adjustment.



8. Press **[MUTING]** then **[ENTER]** to save into the memory.

V. Size Adjustment (VSIZ)

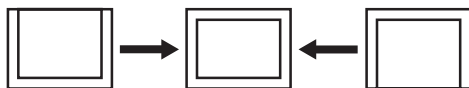
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VSIZ item with **[1]** and **[4]**.
4. Adjust value of VPOS with **[1]** and **[4]** for the best vertical center.
5. Press **[MUTING]** then **[ENTER]** to save into the memory.



V. Center Adjustment (VPOS)

Perform this adjustment after performing H. Frequency (Free Run) Check.

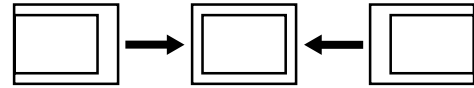
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VPOS item with **[1]** and **[4]**.
4. Adjust value of VPOS with **[3]** and **[6]** for the best vertical center.
5. Press **[MUTING]** then **[ENTER]** to save into the memory.



H. Center Adjustment (HPOS)

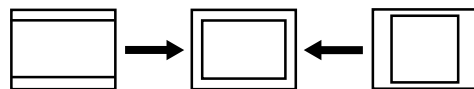
Perform this adjustment after performing H. Frequency (Free Run) Check.

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the HPOS item with **[1]** and **[4]**.
4. Adjust the value of HPOS with **[3]** and **[6]** for the best horizontal center.
5. Press **[MUTING]** then **[ENTER]** to save into the memory.



H. Size Adjustment (HSIZ)

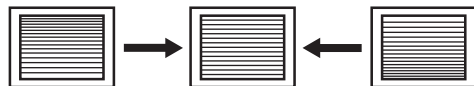
1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Select HSIZ with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best horizontal size.
5. Press **[MUTING]** then **[ENTER]** to save into the memory.



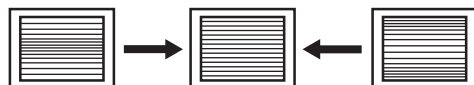
V. Linearity (VLIN), V. Correction (SCOR), Pin Amp (PAMP), and Horizontal Trapezoid (HTRP) Adjustments

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VLIN, SCOR, PAMP, and HTRP with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best horizontal size.
5. Press **[MUTING]** then **[ENTER]** to save into the memory.

V LINEARITY (VLIN)



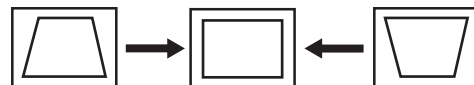
V CORRECTION (SCOR)



PIN AMP (PAMP)



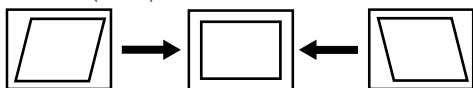
HORIZONTAL TRAPEZOID (HTRP)



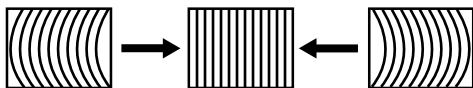
V. Angle (VANG), V. Bow (VBOW), Upper pin (UPIN) and Low Pin (LPIN) Adjustments

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VANG, VBOW, UPIN, and LPIN with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best picture.
5. Press **[MUTING]** then **[ENTER]** to save into the memory.

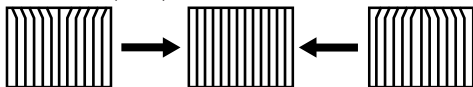
V ANGLE (VANG)



V BOW (VBOW)



UPPER PIN (UPIN)



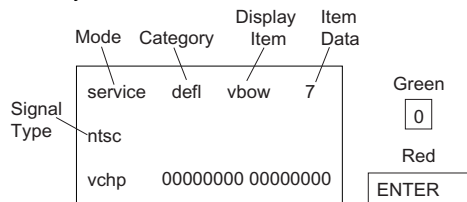
LOW PIN (LPIN)



Service Adjustment Mode Memory

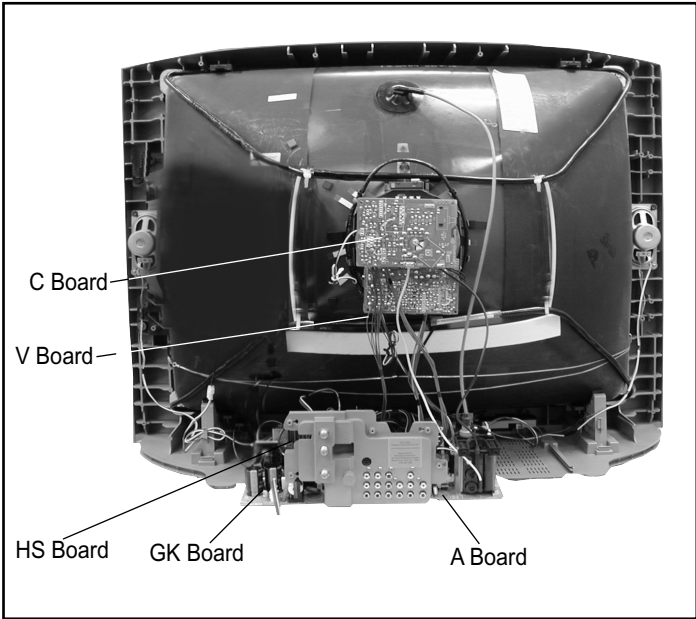
1. After completing all adjustments, press **[0]** then **[ENTER]**.


Read From Memory





SECTION 5: DIAGRAMS



5-1. CIRCUIT BOARDS LOCATION



The components identified by shading and  symbol are critical for safety. Replace only with part number specified.

The symbol  indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

The components identified by  in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by , make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by  and repeat the adjustment until the specified value is achieved.

(Refer to R530 and R531 adjustment on page 16.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION


All capacitors are in μF unless otherwise noted. pF : μF 50V or less are not indicated except for electrolytics and tantalums.


All electrolytics are in 50V unless otherwise specified.


All resistors are in ohms. $\text{k}\Omega=1000\Omega$, $\text{M}\Omega=1000\text{k}\Omega$


Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm
Rating electrical power : $\frac{1}{4}\text{W}$

$\frac{1}{4}\text{W}$ in resistance, $\frac{1}{10}\text{W}$ and $\frac{1}{8}\text{W}$ in chip resistance.


 : nonflammable resistor

 : fusible resistor

 : internal component

 : panel designation and adjustment for repair

\perp : earth ground

 : earth-chassis

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a color-bar signal input.


Readings are taken with a 10M Ω digital multimeter.


Voltages are DC with respect to ground unless otherwise noted.


Voltage variations may be noted due to normal production tolerances.

All voltages are in V.



S : Measurement impossibility.

 : B-line


 : B-line (Actual measured value may be different).

 : signal path (RF)

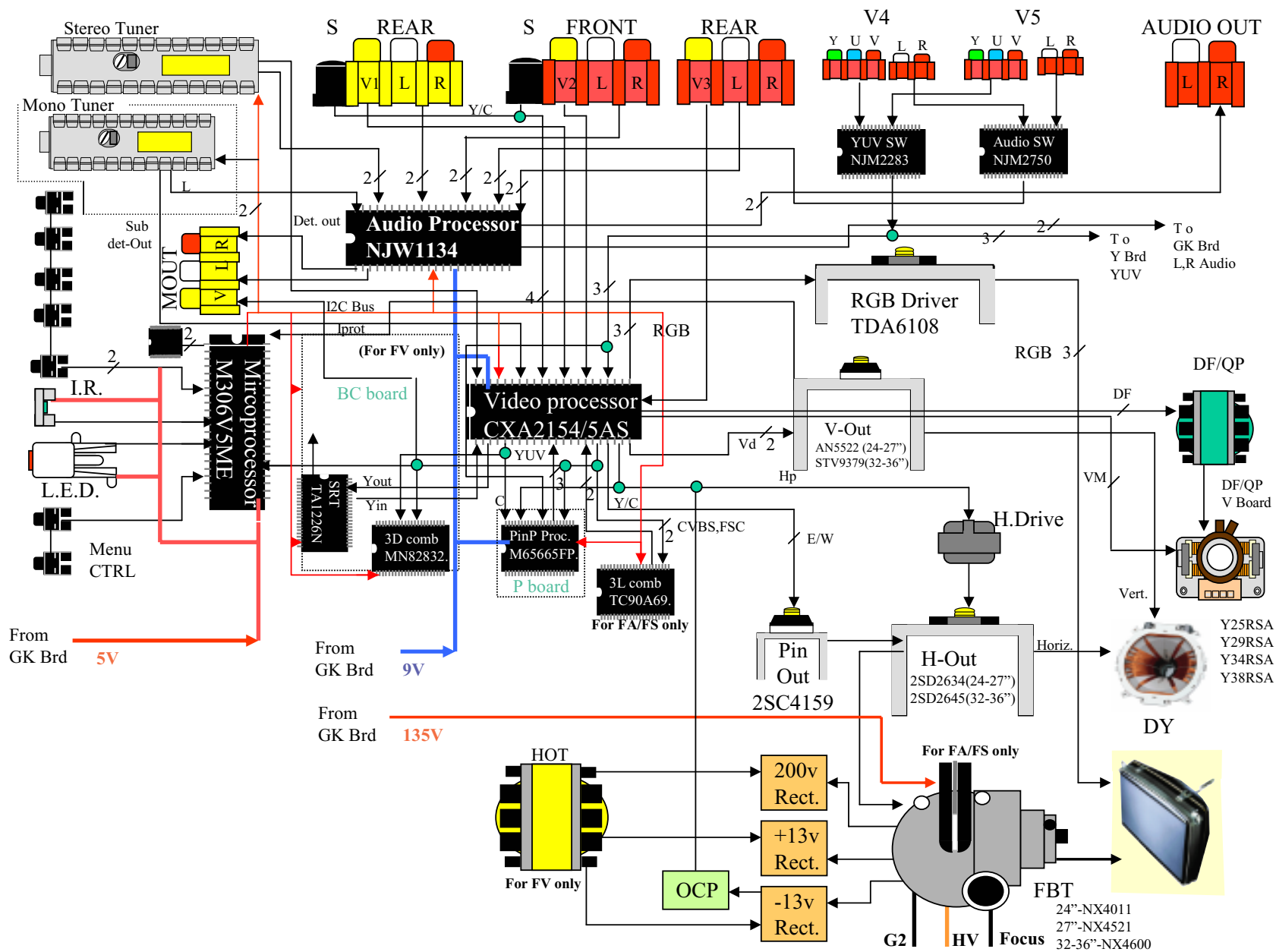
Circled numbers are waveform references.

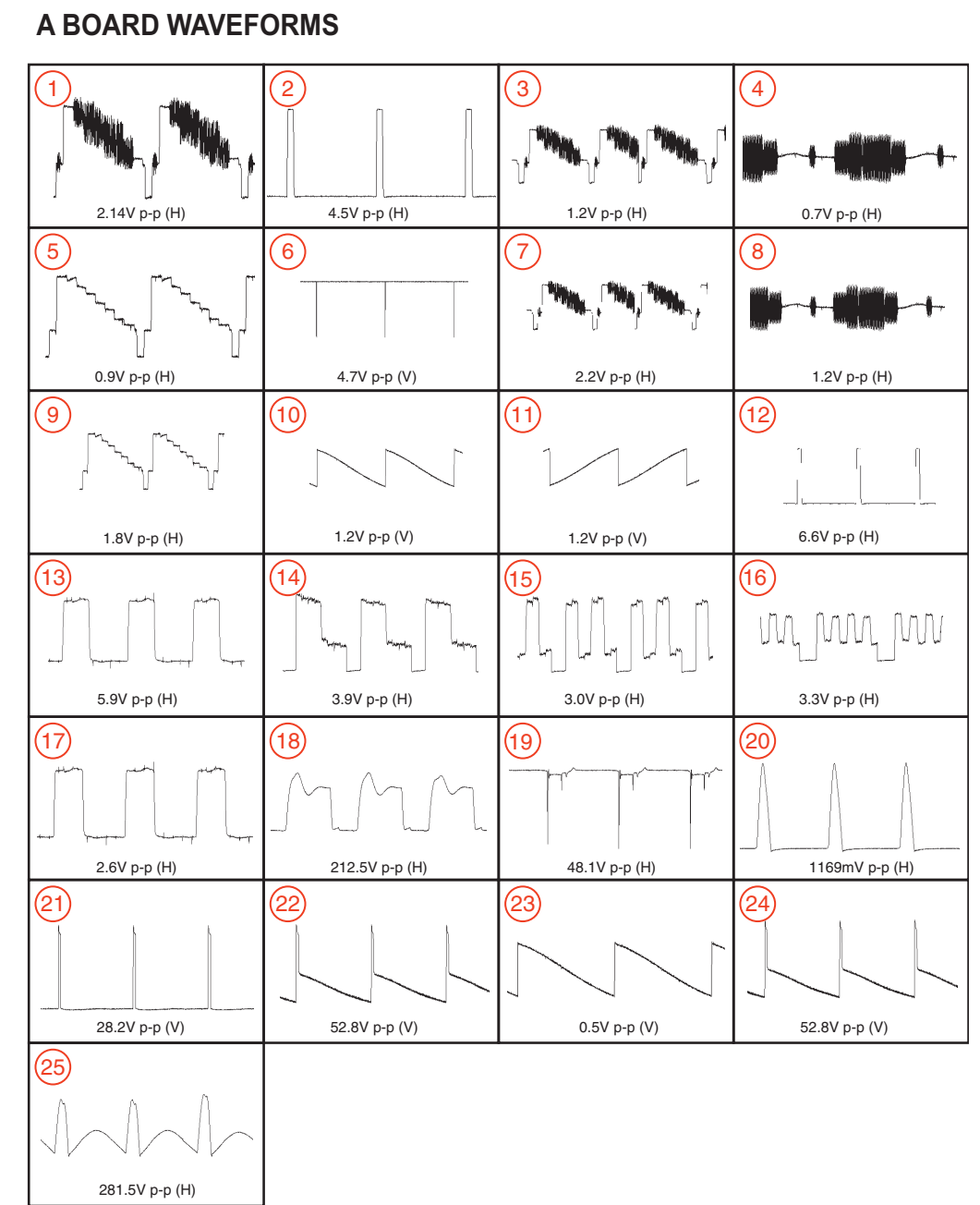
| Part Replaced () | Adjustment () |
|---|--|
| A BOARD: R550, T503, T504, D519, IC501, R533, D521, R532, D520, C531, R529, R530, R531, C532 GK BOARD: IC600, PH602 | HV HOLD DOWN R530, R531 |

REFERENCE INFORMATION

| | | | |
|---|--------------------------|------------------|-------------------------|
| RESISTOR | | CAPACITOR | |
| : RN | METAL FILM | : TA | TANTALUM |
| : RC | SOLID | : PS | STYROL |
| : FPRD | NONFLAMMABLE CARBON | : PP | POLYPROPYLENE |
| : FUSE | NONFLAMMABLE FUSIBLE | : PT | MYLAR |
| : RW | NONFLAMMABLE WIREWOUND | : MPS | METALIZED POLYESTER |
| : RS | NONFLAMMABLE METAL OXIDE | : MPP | METALIZED POLYPROPYLENE |
| : RB | NONFLAMMABLE CEMENT | : ALB | BIPOLAR |
| :  | ADJUSTMENT RESISTOR | : ALT | HIGH TEMPERATURE |
| | | : ALR | HIGH RIPPLE |
| COIL | | | |
| : LF-8L | MICRO INDUCTOR | | |

5-3. BLOCK DIAGRAM





A TUNER/IF
TUNING CONTROL
DEFLECTION
MTS
Y/C JUNGLE

A

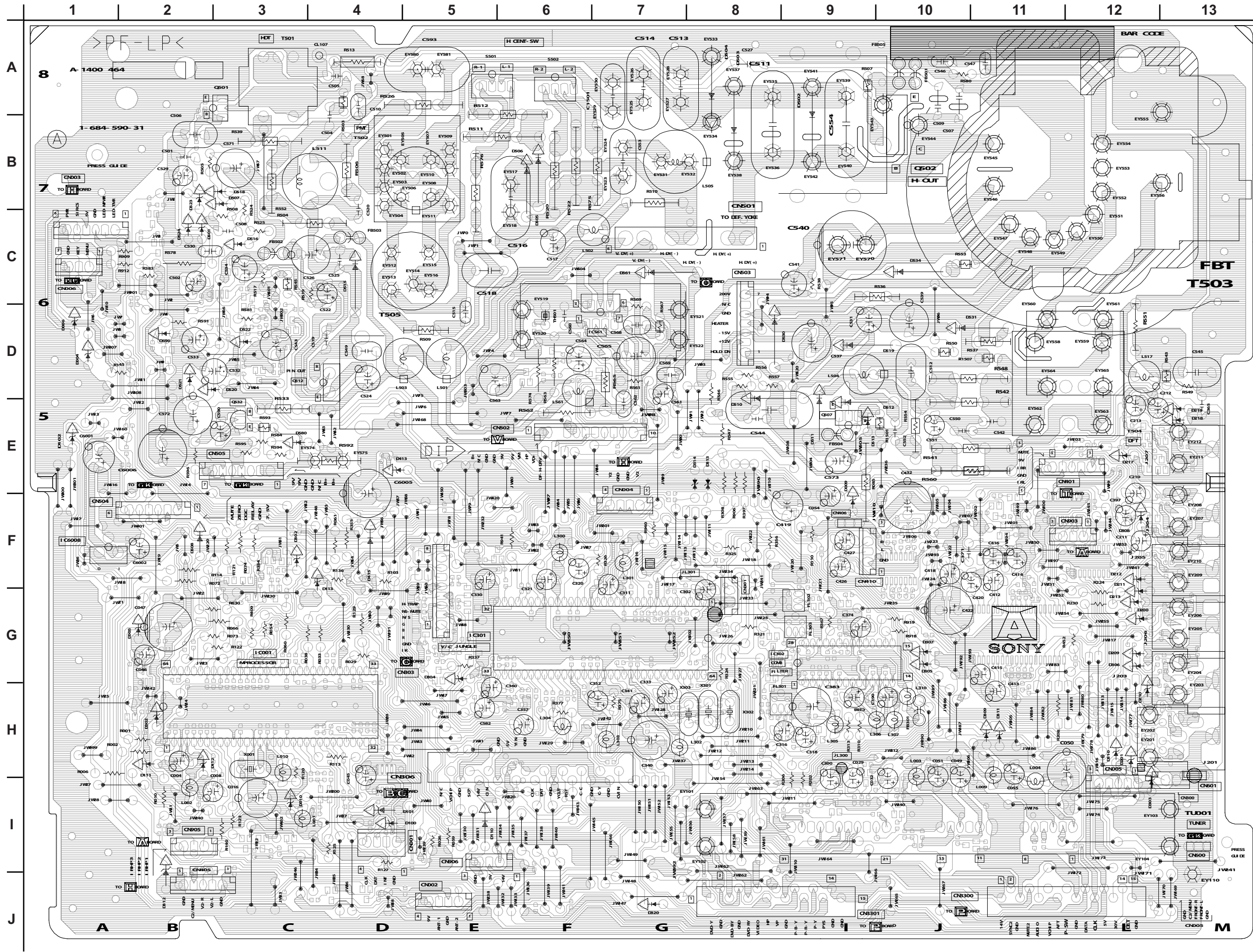
[TUNING CONTROL, DEFLECTION,
TUNER/IF, Y/C JUNGLE, MTS]
COMPONENT SIDE

A BOARD IC VOLTAGE LIST

| IC001 | | 37 | 0.0 | 2 | GND | 30 | 5.9 | 2 | 3.1 | 10 | 4.5 | 6 | 4.5 |
|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------------------------|-------|
| PIN | VOLT | 38 | 4.2 | 3 | GND | 31 | 5.5 | 3 | 4.9 | 11 | 4.5 | 7 | 4.5 |
| 1 | 4.9 | 39 | 1.7 | 4 | GND | 32 | 7.6 | 4 | 2.4 | 12 | 4.5 | 8 | GND |
| 2 | 0.6 | 40 | 2.6 | 5 | 5.0 | 33 | 3.6 | 5 | GND | 13 | 4.5 | 9 | 4.5 |
| 3 | GND | 41 | 5.0 | 6 | 5.0 | 34 | 2.8 | 6 | 1.7 | 14 | 4.5 | 10 | 4.5 |
| 4 | 5.0 | 42 | 5.0 | 7 | 0.0 | 35 | 2.5 | 7 | 2.6 | 15 | 0.6 | 11 | 4.5 |
| 5 | 0.2 | 43 | 0.2 | 8 | 5.0 | 36 | 3.9 | 8 | GND | 16 | 1.7 | 12 | 4.5 |
| 6 | 1.7 | 44 | 0.6 | IC301 | | 37 | 1.5 | 9 | GND | 17 | 1.7 | 13 | 4.5 |
| 7 | 1.4 | 45 | 1.2 | PIN | VOLT | 38 | 1.6 | 10 | GND | 18 | 4.7 | 14 | 4.5 |
| 8 | 0.5 | 46 | 4.8 | 1 | 5.0 | 39 | 1.5 | 11 | 4.9 | 19 | 4.7 | 15 | 4.5 |
| 9 | N/C | 47 | 0.0 | 2 | GND | 40 | 0.0 | 12 | GND | 20 | GND | 16 | 4.5 |
| 10 | 5.0 | 48 | 0.0 | 3 | 5.0 | 41 | 4.6 | 13 | 4.9 | 21 | 9.0 | IC501 | |
| 11 | GND | 49 | 0.1 | 4 | 1.8 | 42 | 4.6 | 14 | GND | 22 | 4.4 | PIN | VOLT |
| 12 | 5.0 | 50 | 4.4 | 5 | 4.8 | 43 | 4.6 | 15 | 4.8 | 23 | 3.8 | 1 | -13.3 |
| 13 | 2.3 | 51 | 5.0 | 6 | 5.0 | 44 | 9.0 | 16 | 4.7 | 24 | 3.8 | 2 | 8.2 |
| 14 | GND | 52 | 0.1 | 7 | 4.8 | 45 | 0.1 | 17 | N/C | 25 | 4.0 | 3 | 7.2 |
| 15 | 2.1 | 53 | 0.0 | 8 | 3.4 | 46 | 4.3 | 18 | N/C | 26 | 0.6 | 4 | -15.0 |
| 16 | 5.0 | 54 | 4.8 | 9 | 5.2 | 47 | 5.2 | 19 | 2.4 | 27 | 4.6 | 5 | 2.3 |
| 17 | 2.6 | 55 | 0.1 | 10 | 1.9 | 48 | 5.2 | 20 | 4.9 | 28 | 4.6 | 6 | 2.5 |
| 18 | 2.6 | 56 | 0.0 | 11 | 0.0 | 49 | GND | 21 | GND | 29 | 4.6 | 7 | -13.5 |
| 19 | 0.3 | 57 | 4.8 | 12 | 4.8 | 50 | 4.8 | 22 | 2.8 | 30 | 4.6 | 8 | 12.0 |
| 20 | 0.0 | 58 | N/C | 13 | 9.0 | 51 | 5.2 | 23 | 2.8 | 31 | 4.6 | IC561 | |
| 21 | 2.1 | 59 | 0.0 | 14 | 0.0 | 52 | 5.2 | 24 | 3.3 | 32 | 4.6 | PIN | VOLT |
| 22 | N/C | 60 | 0.0 | 15 | 4.8 | 53 | 9.1 | 25 | 4.1 | 33 | 4.6 | 1 | 1.5 |
| 23 | 5.0 | 61 | 0.1 | 16 | 4.9 | 54 | 5.3 | 26 | GND | 34 | 4.5 | 2 | 12.0 |
| 24 | 5.0 | 62 | 4.6 | 17 | 4.4 | 55 | 1.7 | 27 | 3.6 | 35 | 4.5 | 3 | -12.0 |
| 25 | 5.0 | 63 | N/C | 18 | GND | 56 | 1.7 | 28 | 1.6 | 36 | 4.5 | 4 | -15.0 |
| 26 | 5.0 | 64 | 0.0 | 19 | 3.8 | 57 | 1.7 | IC400 | | 37 | 4.5 | 5 | 0.3 |
| 27 | 5.0 | IC002 | | 20 | 5.5 | 58 | 6.9 | PIN | VOLT | 38 | 4.5 | 6 | 14.2 |
| 28 | 0.0 | PIN | VOLT | 21 | 3.6 | 59 | 5.0 | 1 | 4.5 | 39 | 4.5 | 7 | 1.4 |
| 29 | 0.0 | 1 | N/C | 22 | 5.8 | 60 | 4.7 | 2 | 4.5 | 40 | 4.5 | IC6008 | |
| 30 | 0.0 | 2 | GND | 23 | 9.0 | 61 | 4.7 | 3 | 4.5 | IC402 | | PIN | VOLT |
| 31 | N/C | 3 | GND | 24 | 4.4 | 62 | 4.7 | 4 | 4.5 | PIN | VOLT | I | 7.5 |
| 32 | N/C | 4 | 5.0 | 25 | GND | 63 | 1.1 | 5 | 4.5 | 1 | GND | O | 5.0 |
| 33 | 0.0 | 5 | 5.0 | 26 | 4.1 | 64 | 5.1 | 6 | 4.5 | 2 | 0.3 | G | GND |
| 34 | 0.0 | IC003 | | 27 | 2.4 | IC302 | | 7 | 4.5 | 3 | 9.0 | All voltages are in V. | |
| 35 | 0.0 | PIN | VOLT | 28 | 3.5 | PIN | VOLT | 8 | 4.5 | 4 | 4.5 | | |
| 36 | 0.0 | 1 | GND | 29 | 3.5 | 1 | 1.3 | 9 | 4.5 | 5 | 4.5 | | |

A BOARD TRANSISTOR VOLTAGE LIST

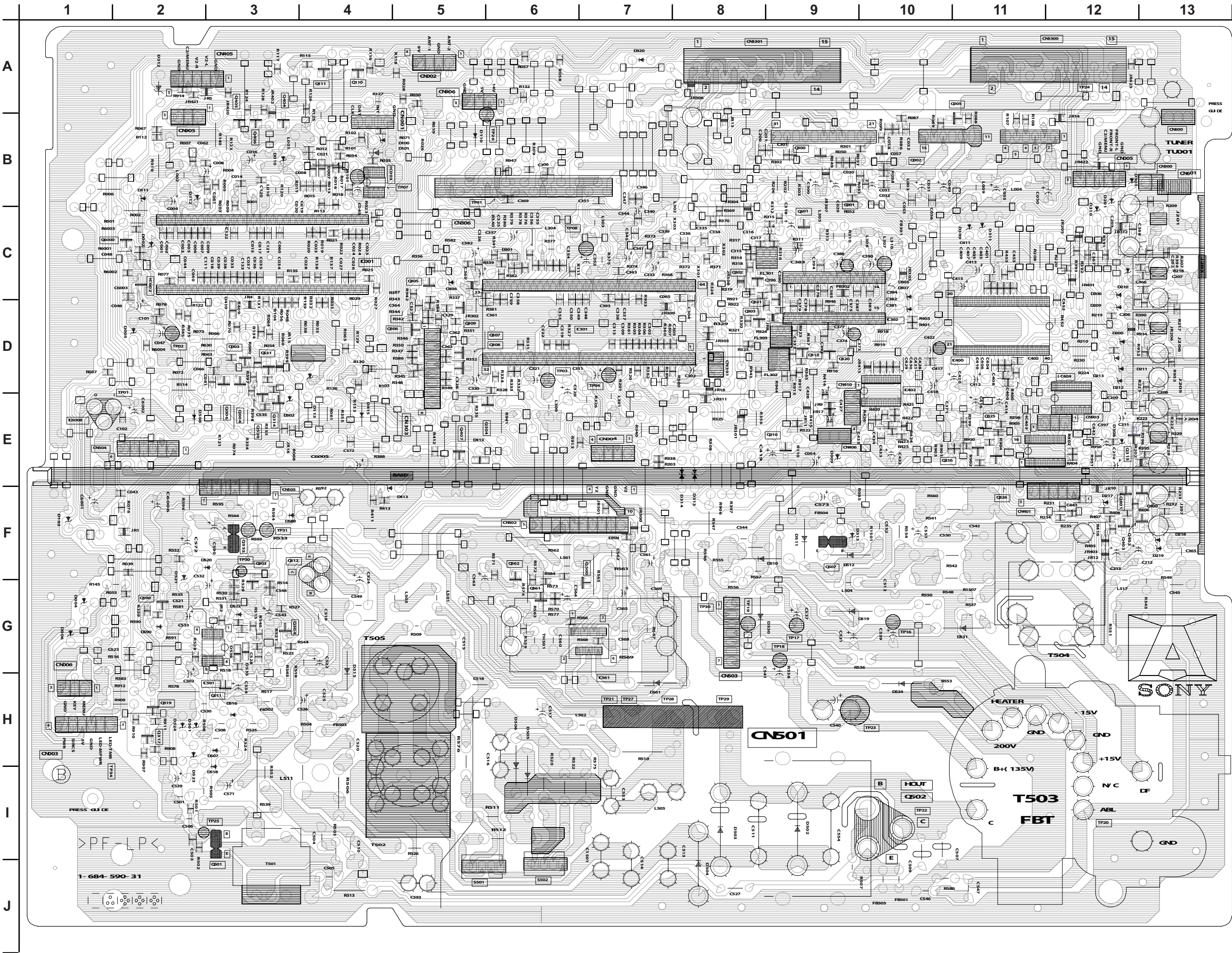
| | B | C | E | | B | C | E |
|------|-----|-----|-----|------------------------|-------|-------|-------|
| Q001 | 0.0 | 0.4 | 5.0 | Q319 | 0.6 | 0.6 | GND |
| Q002 | 4.4 | 9.0 | 3.8 | Q320 | 4.8 | GND | 5.4 |
| Q003 | 0.7 | 0.0 | GND | Q321 | 3.6 | GND | 4.3 |
| Q004 | 0.0 | 4.3 | GND | Q402 | 0.0 | 0.0 | GND |
| Q005 | 0.1 | 4.9 | GND | Q403 | 0.0 | 0.0 | GND |
| Q010 | 4.3 | GND | 4.9 | Q407 | 0.7 | 0.0 | GND |
| Q110 | 4.8 | 0.0 | 5.0 | Q501 | 0.0 | 123.6 | GND |
| Q300 | 4.6 | GND | 5.2 | Q502 | 0.0 | 131.8 | GND |
| Q301 | 3.1 | 9.0 | 2.4 | Q507 | 0.3 | 110.7 | GND |
| Q302 | 2.7 | GND | 3.2 | Q511 | -13.5 | -8.4 | -15.0 |
| Q303 | 5.0 | 9.0 | 4.4 | Q512 | -14.9 | -2.0 | -15.0 |
| Q304 | 5.0 | 9.0 | 4.4 | Q530 | 0.0 | 4.4 | GND |
| Q305 | 5.0 | 0.0 | 3.4 | Q531 | 4.4 | 0.0 | 4.4 |
| Q306 | 2.0 | 9.0 | 2.3 | Q532 | 133.6 | 0.0 | 133.8 |
| Q307 | 1.5 | GND | 2.2 | Q561 | 0.0 | 4.4 | GND |
| Q308 | 1.5 | GND | 2.2 | Q562 | 0.0 | 0.0 | GND |
| Q309 | 1.5 | GND | 2.2 | Q590 | 0.0 | 3.6 | GND |
| Q313 | 4.1 | GND | 4.7 | Q6000 | 0.6 | 1.2 | GND |
| Q317 | 0.0 | 3.9 | GND | All voltages are in V. | | | |



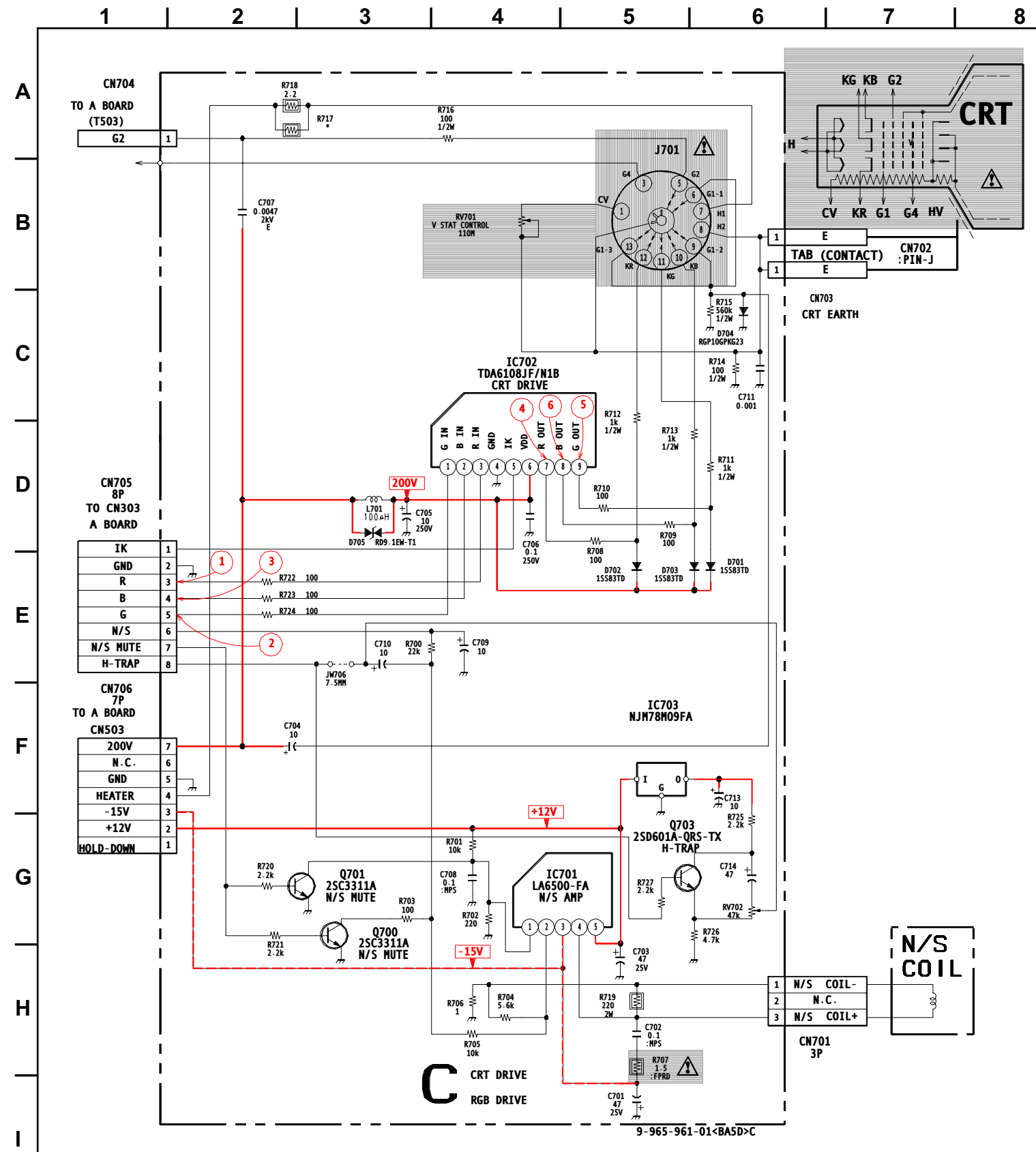
A BOARD LOCATOR LIST

| DIODE | | D502 | I-9 | TRANSISTOR | |
|-------|------|--------|------|------------|------|
| D002 | C-2 | D503 | I-8 | Q001 | B-9 |
| D004 | G-1 | D504 | J-8 | Q002 | B-10 |
| D005 | D-2 | D505 | H-6 | Q003 | D-3 |
| D006 | G-1 | D506 | H-6 | Q004 | E-3 |
| D007 | B-4 | D507 | H-3 | Q005 | B-11 |
| D008 | B-4 | D508 | E-2 | Q006 | E-3 |
| D009 | E-9 | D510 | F-8 | Q010 | E-9 |
| D010 | B-3 | D511 | F-8 | Q110 | A-4 |
| D100 | B-4 | D512 | F-9 | Q300 | B-9 |
| D101 | B-4 | D513 | F-9 | Q301 | B-9 |
| D102 | F-1 | D515 | G-4 | Q302 | C-8 |
| D110 | B-5 | D516 | H-3 | Q303 | C-8 |
| D111 | B-2 | D518 | I-3 | Q304 | E-5 |
| D112 | B-2 | D519 | G-10 | Q305 | C-5 |
| D113 | E-3 | D520 | F-3 | Q306 | D-5 |
| D200 | D-12 | D521 | F-2 | Q307 | D-6 |
| D201 | C-12 | D522 | G-3 | Q308 | D-6 |
| D209 | D-12 | D523 | I-3 | Q309 | D-5 |
| D210 | D-12 | D524 | H-2 | Q313 | D-9 |
| D211 | D-12 | D530 | G-8 | Q317 | H-2 |
| D212 | D-12 | D531 | G-10 | Q319 | H-2 |
| D218 | F-13 | D534 | H-10 | Q320 | D-9 |
| D219 | F-13 | D535 | G-3 | Q321 | D-8 |
| D303 | B-12 | D536 | G-3 | Q402 | F-12 |
| D304 | C-5 | D561 | H-7 | Q403 | F-12 |
| D305 | C-10 | D580 | F-4 | Q407 | E-5 |
| D306 | C-12 | D590 | G-2 | Q500 | F-7 |
| D307 | C-10 | IC | | Q501 | J-3 |
| D309 | C-10 | | C-4 | Q502 | I-10 |
| D310 | C-12 | IC002 | C-2 | Q507 | F-10 |
| D311 | C-11 | IC003 | B-4 | Q511 | H-3 |
| D313 | F-8 | IC301 | D-7 | Q512 | F-3 |
| D314 | F-8 | IC302 | D-10 | Q530 | E-3 |
| D410 | D-3 | IC400 | D-11 | Q531 | D-3 |
| D412 | E-5 | IC501 | H-3 | Q532 | F-3 |
| D413 | F-5 | IC561 | H-7 | Q561 | G-6 |
| D415 | E-4 | IC6008 | E-1 | Q562 | F-6 |
| D501 | H-2 | | | Q590 | G-2 |
| | | | | Q6000 | C-1 |

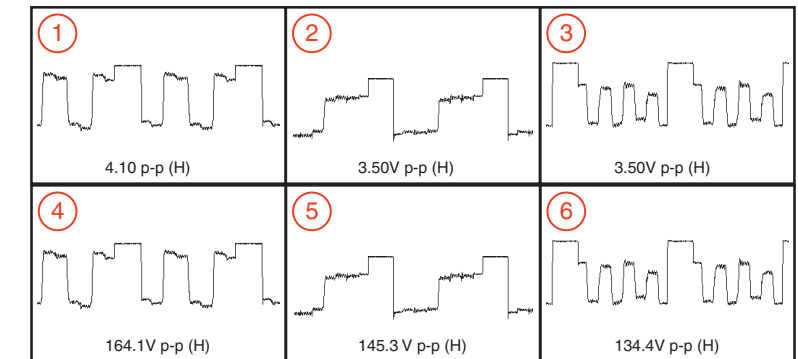
A [TUNING CONTROL, DEFLECTION,
TUNER/IF, Y/C JUNGLE, MTS]
CONDUCTOR SIDE



C BOARD SCHEMATIC DIAGRAM



C BOARD WAVEFORM



C BOARD IC VOLTAGE LIST

| IC701 | |
|-------|-------|
| PIN | VOLT |
| 1 | 0.3 |
| 2 | 0.3 |
| 3 | -13.0 |
| 4 | 0.5 |
| 5 | 12.0 |
| IC702 | |
| PIN | VOLT |
| 1 | 2.2 |
| 2 | 2.2 |
| 3 | 2.2 |
| 4 | GND |
| 5 | 5.0 |
| 6 | 200.0 |
| 7 | 139.7 |
| 8 | 142.0 |
| 9 | 138.6 |
| IC703 | |
| PIN | VOLT |
| I | 12.0 |
| O | 7.0 |
| G | GND |

All voltages are in V.

C BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|------|-----|-----|-----|
| Q700 | 0.3 | 0.8 | GND |
| Q701 | 0.3 | 0.3 | GND |
| Q703 | 4.0 | 5.0 | 0.1 |

All voltages are in V.



HS BOARD SCHEMATIC DIAGRAM

GK BOARD IC VOLTAGE LIST

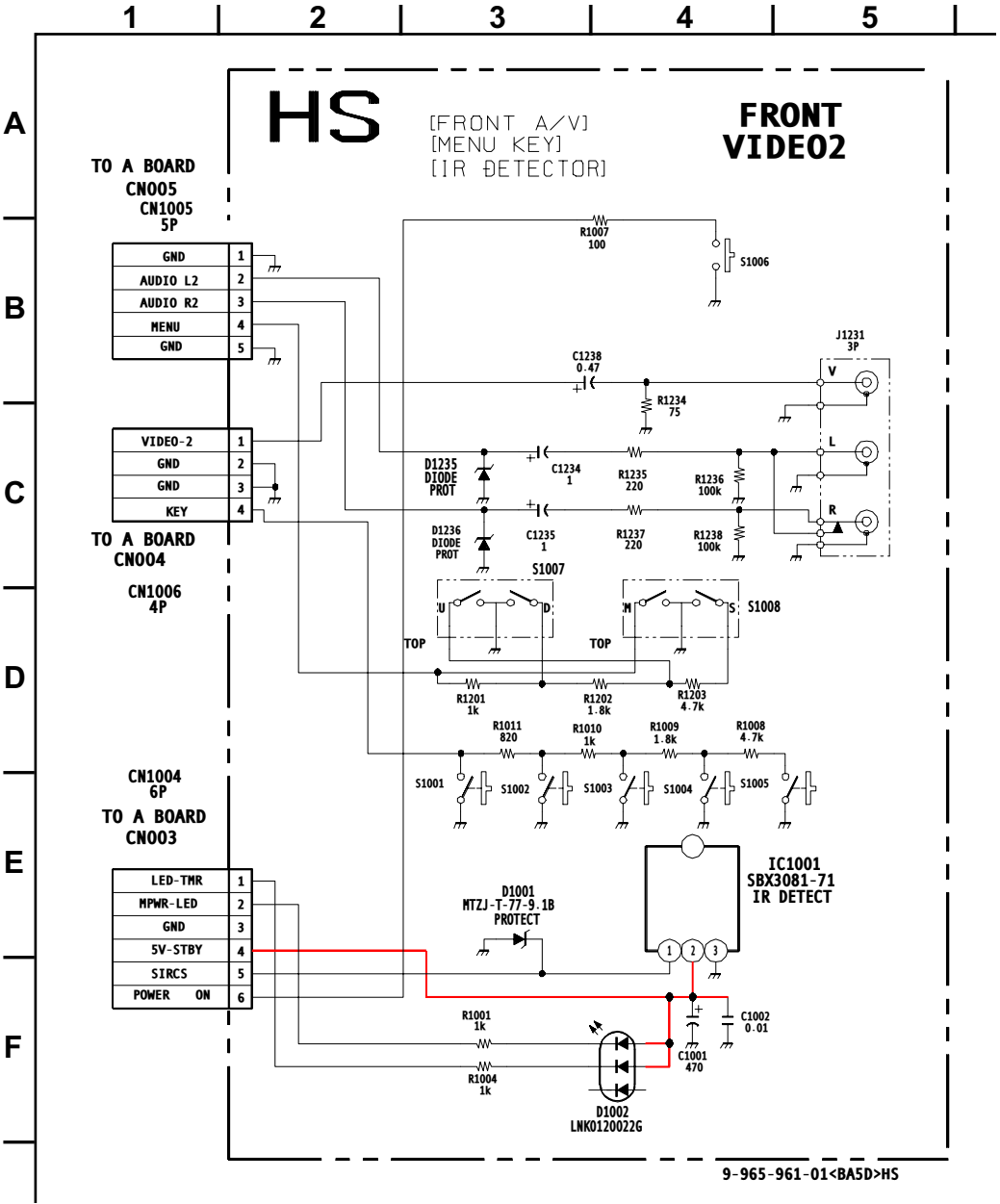
| IC600 | | 11 | -157.1 | 3 | 2.4 | 8.0 | 0.1 | O | 9.0 | 9 | 11.0 |
|-------|--------|-------|--------|-------|------|-------|------|--------|------|------------------------|------|
| PIN | VOLT | 12 | -152.3 | 4 | 8.4 | 9.0 | 0.6 | G | GND | 10 | 4.0 |
| 1 | -154.0 | 13 | N/C | 5 | GND | 10.0 | 0.6 | IC1405 | | 11 | 3.9 |
| 2 | -155.0 | 14 | 7.0 | IC602 | | 11.0 | GND | PIN | VOLT | 12 | GND |
| 3 | -154.8 | 15 | -2.6 | PIN | VOLT | IC605 | | 1 | 10.1 | 13 | 0.4 |
| 4 | -154.4 | 16 | 1.9 | 1 | 6.3 | PIN | VOLT | 2 | GND | 14 | 9.9 |
| 5 | -157.1 | 17 | N/C | 2 | 4.5 | I | 6.1 | 3 | 14.0 | 15 | 14.0 |
| 6 | -156.9 | 18 | 156.8 | 3 | 0.0 | O | 5.0 | 4 | 10.1 | 16 | GND |
| 7 | -150.2 | IC601 | | 4 | 0.0 | G | GND | 5 | 2.9 | 17 | 9.9 |
| 8 | -138.8 | PIN | VOLT | 5 | 5.0 | IC609 | | 6 | N/C | All voltages are in V. | |
| 9 | -157.1 | 1 | 134.6 | 6 | 5.0 | PIN | VOLT | 7 | 4.0 | | |
| 10 | -146.9 | 2 | N/C | 7 | 9.0 | I | 10.5 | 8 | 4.0 | | |

GK BOARD TRANSISTOR VOLTAGE LIST

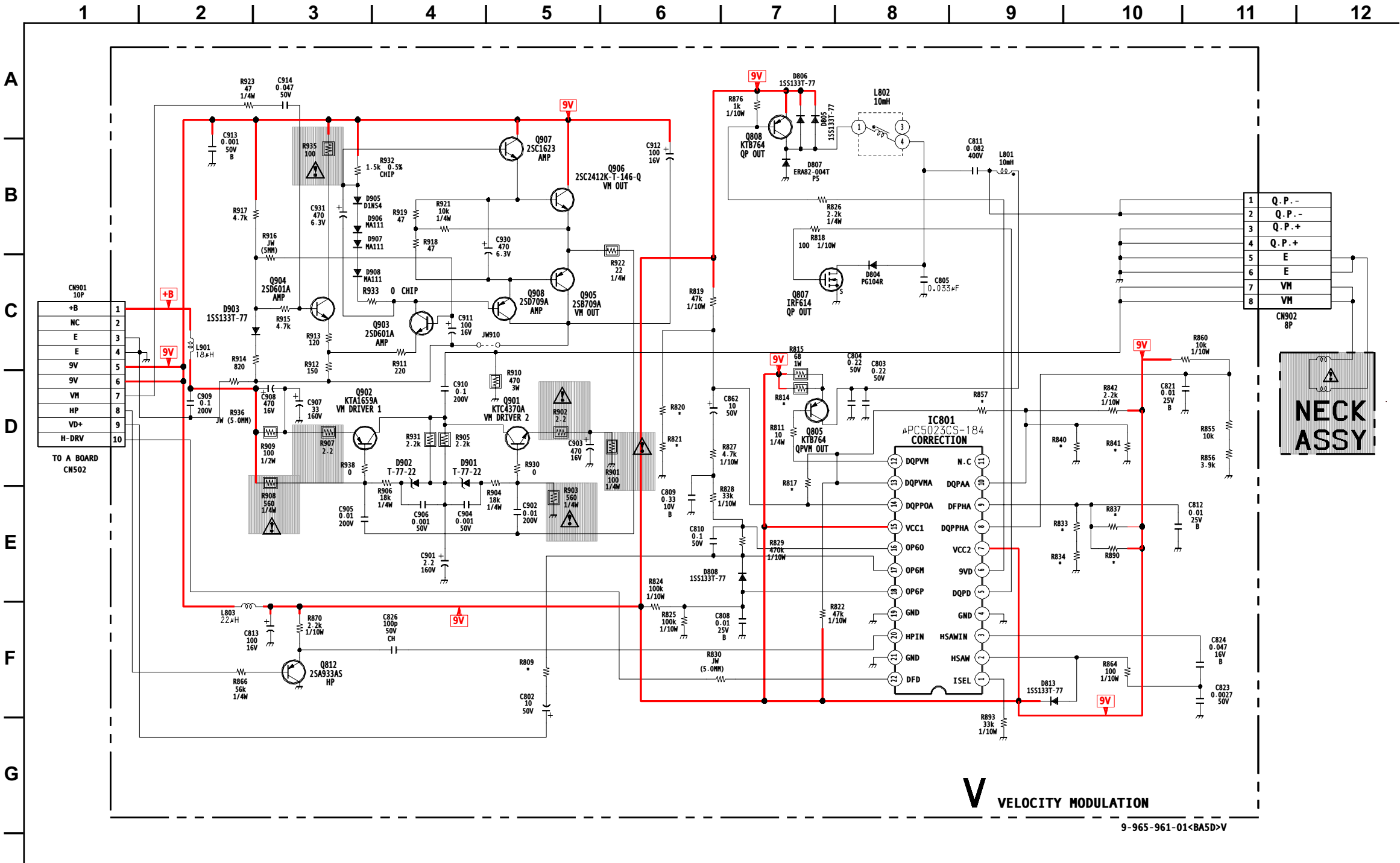
| | B | C | E |
|-------|-----|------|-----|
| Q509 | 0.3 | 10.5 | GND |
| Q605 | 7.6 | 18.8 | 7.6 |
| Q606 | 0.0 | 0.5 | GND |
| Q608 | 0.6 | 0.0 | GND |
| Q690 | 6.1 | 0.5 | 5.9 |
| Q691 | 6.9 | 7.6 | 7.6 |
| Q1401 | 0.0 | GND | 0.6 |

| | D | G | S |
|------|-------|--------|--------|
| Q600 | 156.9 | 2.5 | -2.5 |
| Q601 | -2.6 | -152.8 | -157.4 |

All voltages are in V.



V BOARD SCHEMATIC DIAGRAM



V BOARD IC VOLTAGE LIST

| IC801 | | 11 | N/C |
|-------|------|----|-----|
| PIN | VOLT | 12 | 3.5 |
| 1 | 7.4 | 13 | 3.8 |
| 2 | 2.3 | 14 | 4.5 |
| 3 | 4.8 | 15 | 9.0 |
| 4 | GND | 16 | 4.6 |
| 5 | 6.3 | 17 | 4.6 |
| 6 | 4.5 | 18 | 4.5 |
| 7 | 9.0 | 19 | N/C |
| 8 | 5.8 | 20 | 4.8 |
| 9 | 4.6 | 21 | GND |
| 10 | 4.8 | 22 | 0.3 |

All voltages are in V.

V BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|------|-------|------|-------|
| Q805 | 3.5 | 1.8 | 4.2 |
| Q808 | 8.6 | 4.3 | 9.0 |
| Q812 | 1.3 | GND | 2.0 |
| Q901 | 1.4 | 67.0 | 0.8 |
| Q902 | 132.9 | 67.0 | 133.4 |
| Q903 | 1.2 | 6.2 | 1.8 |
| Q904 | 1.2 | 8.8 | 1.8 |
| Q905 | 7.1 | 0.0 | 6.7 |
| Q906 | 7.4 | 9.0 | 7.1 |

| | D | G | S |
|------|-----|-----|-----|
| Q807 | 9.5 | 6.3 | GND |

All voltages are in V.

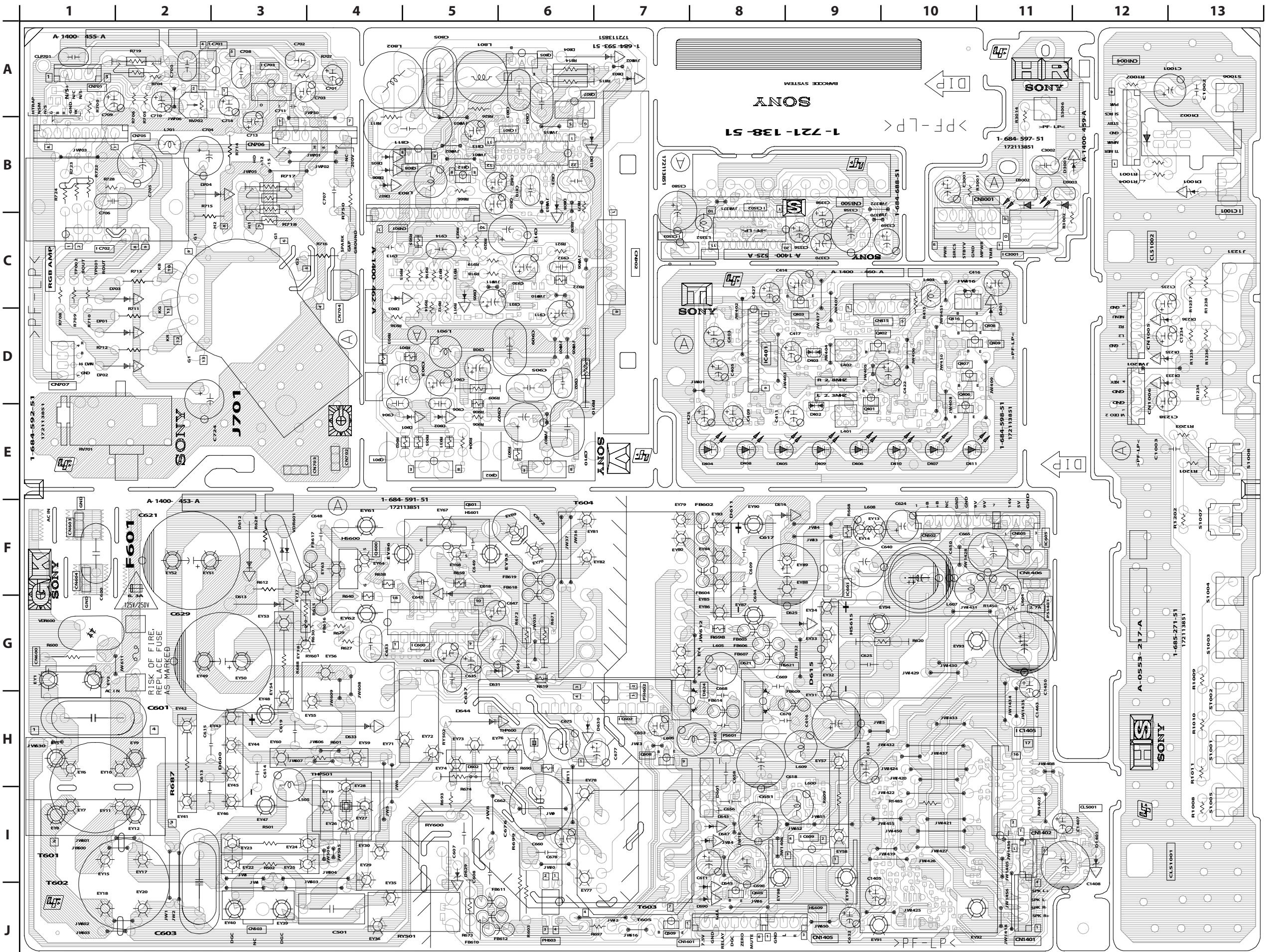
C [RGB DRIVE, CRT DRIVE]

GK [AUDIO, POWER SUPPLY]

HS [FRONT A/V, MENU KEY,
IR DETECTOR]

V [VELOCITY MODULATION]

COMPONENT SIDE



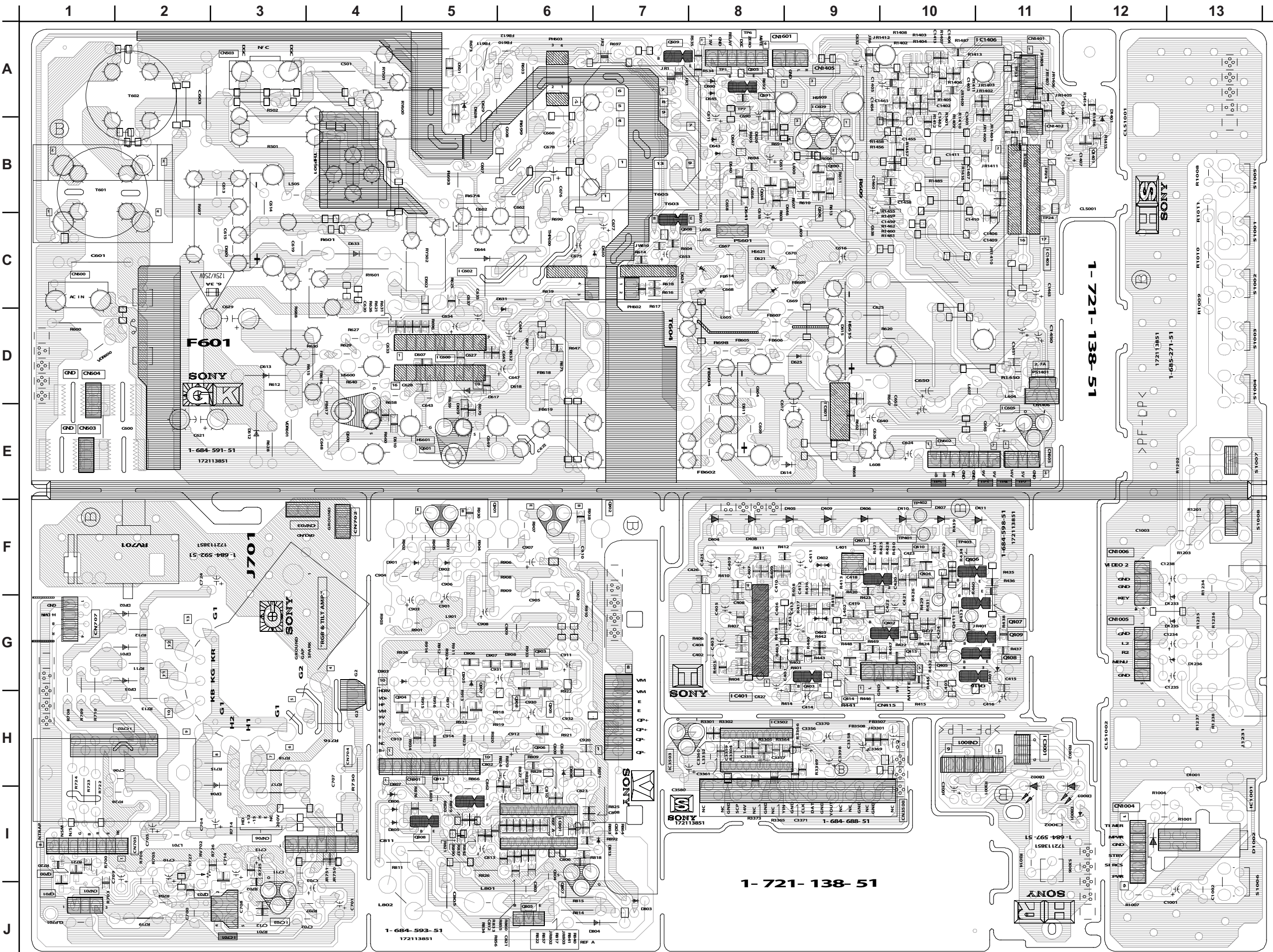
C [RGB DRIVE, CRT DRIVE]

GK [AUDIO, POWER SUPPLY]

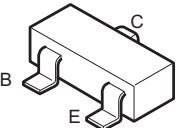
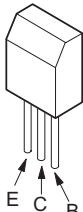
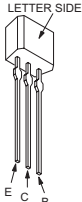
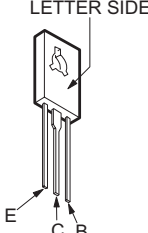
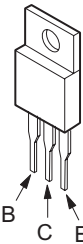
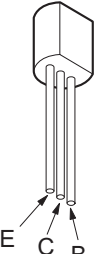
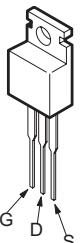
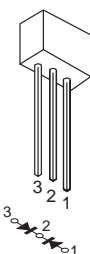
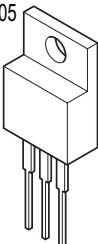
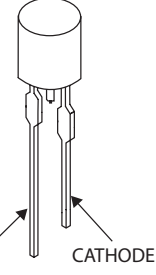
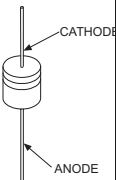
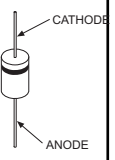
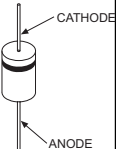
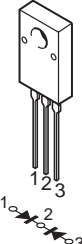
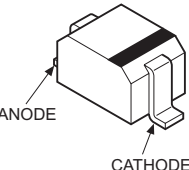
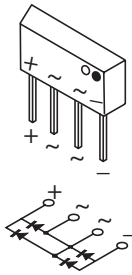
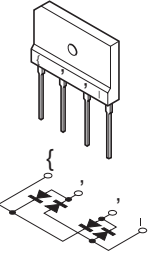
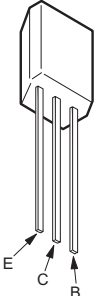
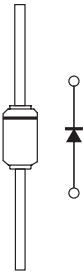
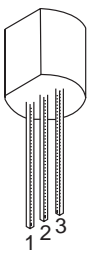
HS [FRONT A/V, MENU KEY, IR DETECTOR]

V [VELOCITY MODULATION]

CONDUCTOR SIDE



5-5. SEMICONDUCTORS


| | | | | |
|--|---|--|--|--|
| <p>2SB709A-QRS-TX 2SD601A-QRS-TX 2SC2412K-T-146-QR</p>  | <p>2SC3209LK-TP 2SD774-T-34</p>  | <p>2SD1858-Q-TV2 2SC3311A-QRSTA 2SD2144S-TP-UVW</p>  | <p>2SC3840K</p>  | <p>2SC4159-E</p>  |
| <p>2SA10910-TPE2</p>  | <p>IRF614</p>  | <p>SVC203SPA-AL</p>  | <p>IRFIB7N50A-LF31 2SC5511 2SA2005</p>  | <p>DAL5815</p>  |
| <p>D1NS4-TA2 D1NS4-TR ERA38-06TP1 ERA82-004TP5 1SS133T-77 MTZJ-T-77-3.3B MTZJ-T-77-3.6B MTZJ-T-77-3.9B MTZJ-T-77-6.2B MTZJ-T-77-6.8B MTZJ-T-77-12C MTZJ-T-77-15B MTZJ-T-77-22</p>  | <p>ERC06-15S MTZJ-T-77-5.1C MTZJ-T-77-5.6C MTZJ-T-77-7.5A MTZJ-T-77-9.1B MTZJ-T-77-10B MTZJ-T-77-30D RGP10-GPKG3 RGP02-17PKG23 RGP15GPKG23</p>  | <p>EL1Z-V1 ERB44-06TP1 ERC04-06SE 1SS83TD 1N4003GA 1N4937/23 GP08DPKG23 PR1004GT RGP10GPKG23 RU4AM-T3</p>  | <p>D10SC4M</p>  | <p>MA111-TX UDZSTE-1710B</p>  |
| | <p>S1VB20</p>  | <p>D4SB60L-F</p>  | <p>2SC2668-YTP</p>  | <p>MTZJ-T-77-27</p>  |
| <p>2SA933AS-QRT</p>  | | | | |

SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

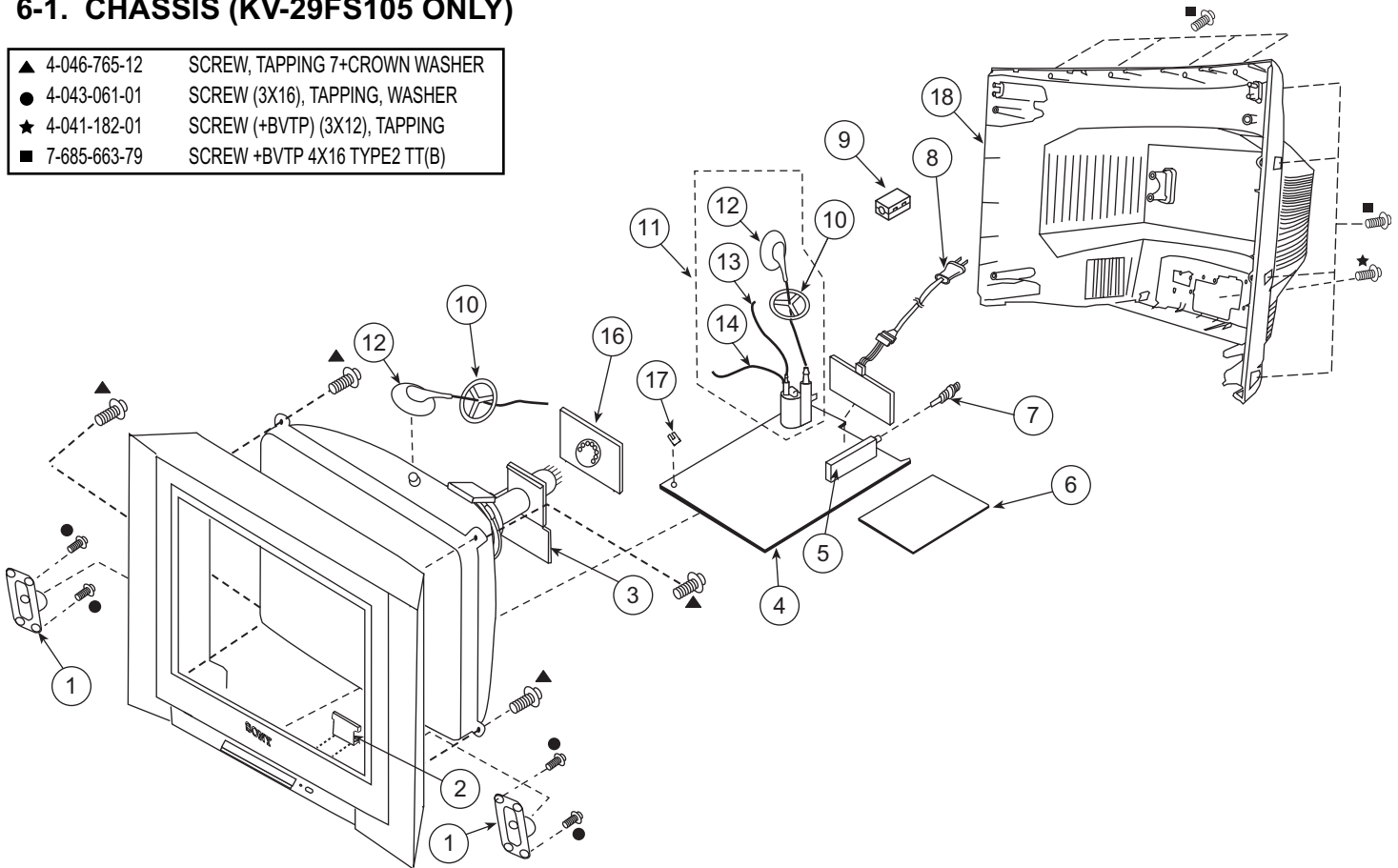
The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.









* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

6-1. CHASSIS (KV-29FS105 ONLY)

| | | |
|---|--------------|-------------------------------|
| ▲ | 4-046-765-12 | SCREW, TAPPING 7+CROWN WASHER |
| ● | 4-043-061-01 | SCREW (3X16), TAPPING, WASHER |
| ★ | 4-041-182-01 | SCREW (+BVTP) (3X12), TAPPING |
| ■ | 7-685-663-79 | SCREW +BVTP 4X16 TYPE2 TT(B) |



| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION | [ASSEMBLY INCLUDES] |
|--|--------------|---|--|--------------|--------------------------|---------------------|
| 1 | 1-825-206-11 | LOUDSPEAKER (6X12CM) | 10 | 4-041-203-01 | HOLDER, HV CABLE | |
| * 2 | A-1401-128-A | HS (VAR) BOARD, MOUNTED |  11 | 1-453-310-11 | FBT ASSY, NX-4521///X4J4 | [12-14] |
| * 3 | A-1401-098-A | V (VAR) BOARD, MOUNTED |  12 | 1-251-374-14 | CAP ASSY, HIGH-VOLTAGE | |
| * 4 | A-1300-581-A | A BOARD, COMPLETE |  13 | 1-900-800-82 | WIRE ASSY, FOCUS | |
| The high-voltage leads associated with the FBT on the A board are not included and must be ordered separately. (See 12-14) | | |  14 | 1-900-803-22 | WIRE ASSY, G2 LEAD | |
|  5 | 8-598-593-50 | TUNER, FSS BTF-WA421 | * 16 | A-1401-898-A | C (VAR) BOARD, MOUNTED | |
| * 6 | A-1401-127-A | GK (VAR) BOARD, MOUNTED | * 17 | 3-696-606-02 | HINGE, VI | |
|  7 | 1-766-374-11 | PLUG, F-PIN | 18 | 4-089-053-01 | COVER, REAR | |
|  8 | 1-827-116-11 | CORD, POWER (WITH CONNECTOR) (KV-29FS105 ARGENTINA ONLY) | | | | |
|  8 | 1-791-225-14 | CORD, POWER (WITH CONNECTOR) (KV-29FS105 BRAZIL ONLY) | | | | |
| 9 | 1-500-484-21 | CLAMP, SLEEVE FERRITE | | | | |

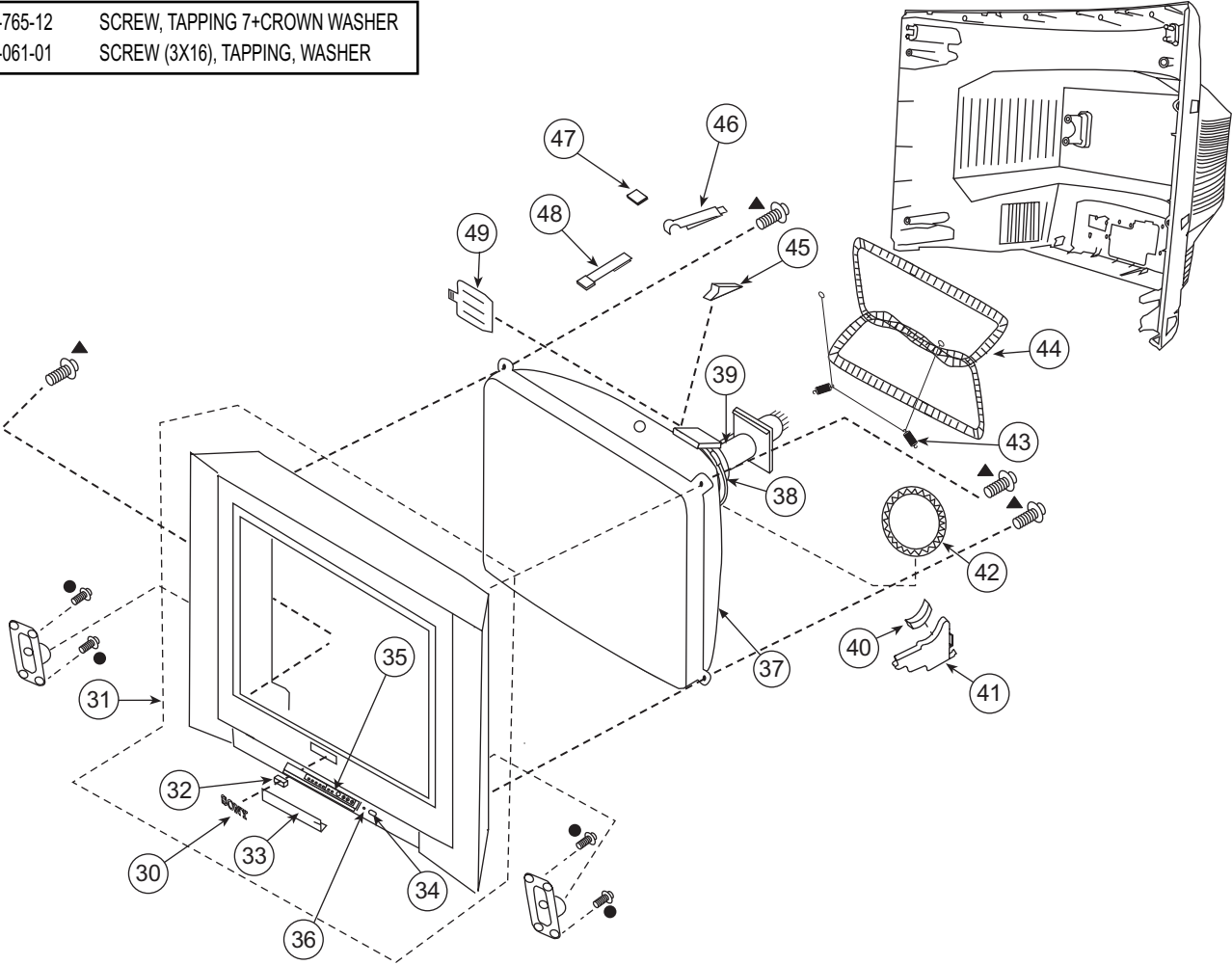
NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

6-2. PICTURE TUBE (KV-29FS105 ONLY)


- ▲

4-046-765-12
- SCREW, TAPPING 7+CROWN WASHER
-
- 4-043-061-01

SCREW (3X16), TAPPING, WASHER

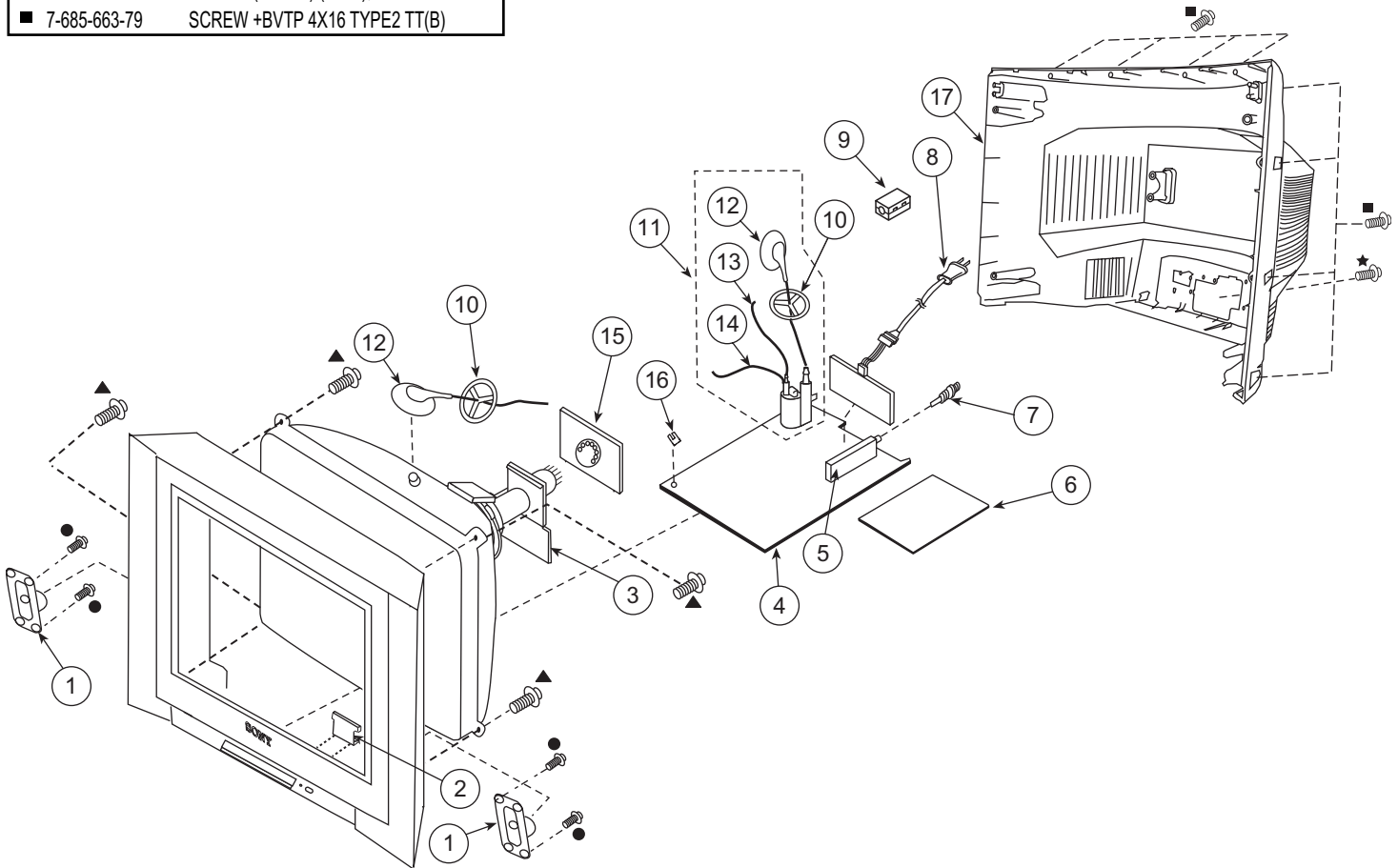


| REF. NO. | PART NO. | DESCRIPTION | [ASSEMBLY INCLUDES] | REF. NO. | PART NO. | DESCRIPTION |
|----------|--------------|----------------------------------|---------------------|----------|--------------|----------------------------|
| 30 | 4-046-160-31 | EMBLEM, SONY NO.9 | [32-35] | 40 | 4-090-578-01 | CUSHION, CRT SUPPORTER |
| 31 | X-2021-302-1 | BEZNET ASSY | | 41 | 4-089-062-02 | SUPPORTER, CRT |
| * 32 | 4-083-303-01 | SPRING, METAL | | ⚠ 42 | 1-452-896-11 | COIL, NA ROTATION (RT-200) |
| 33 | 4-089-056-21 | DOOR | | 43 | 4-036-329-11 | SPRING (B), TENSION |
| 34 | 4-089-057-21 | BUTTON, POWER | | ⚠ 44 | 1-419-523-21 | COIL, DEGAUSSING |
| 35 | 4-089-016-11 | LABEL, DOOR | | 45 | 4-031-319-01 | SPACER, DY |
| 36 | 4-089-058-11 | GUIDE, LED | | * 46 | 4-062-970-12 | CLIP (29RSN), DGC |
| ⚠ 37 | 8-735-083-05 | CRT 29RSN(SDP)(SOUTH) M68LNH050X | | 47 | 1-452-885-11 | MAGNET, LANDING |
| ⚠ 38 | 8-451-494-41 | DY Y29RSA-V | | 48 | 4-083-414-01 | PIECE A(110), CONV CORRECT |
| ⚠ 39 | 8-453-011-11 | NECK ASSEMBLY NA299-M | | 49 | 4-081-170-01 | PLATE, TLH CORRECTION |


NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

6-3. CHASSIS (KV-34FS105 ONLY)



| | |
|----------------|-------------------------------|
| ▲ 4-046-765-12 | SCREW, TAPPING 7+CROWN WASHER |
| ● 4-043-061-01 | SCREW (3X16), TAPPING, WASHER |
| ★ 4-041-182-01 | SCREW (+BVTP) (3X12), TAPPING |
| ■ 7-685-663-79 | SCREW +BVTP 4X16 TYPE2 TT(B) |

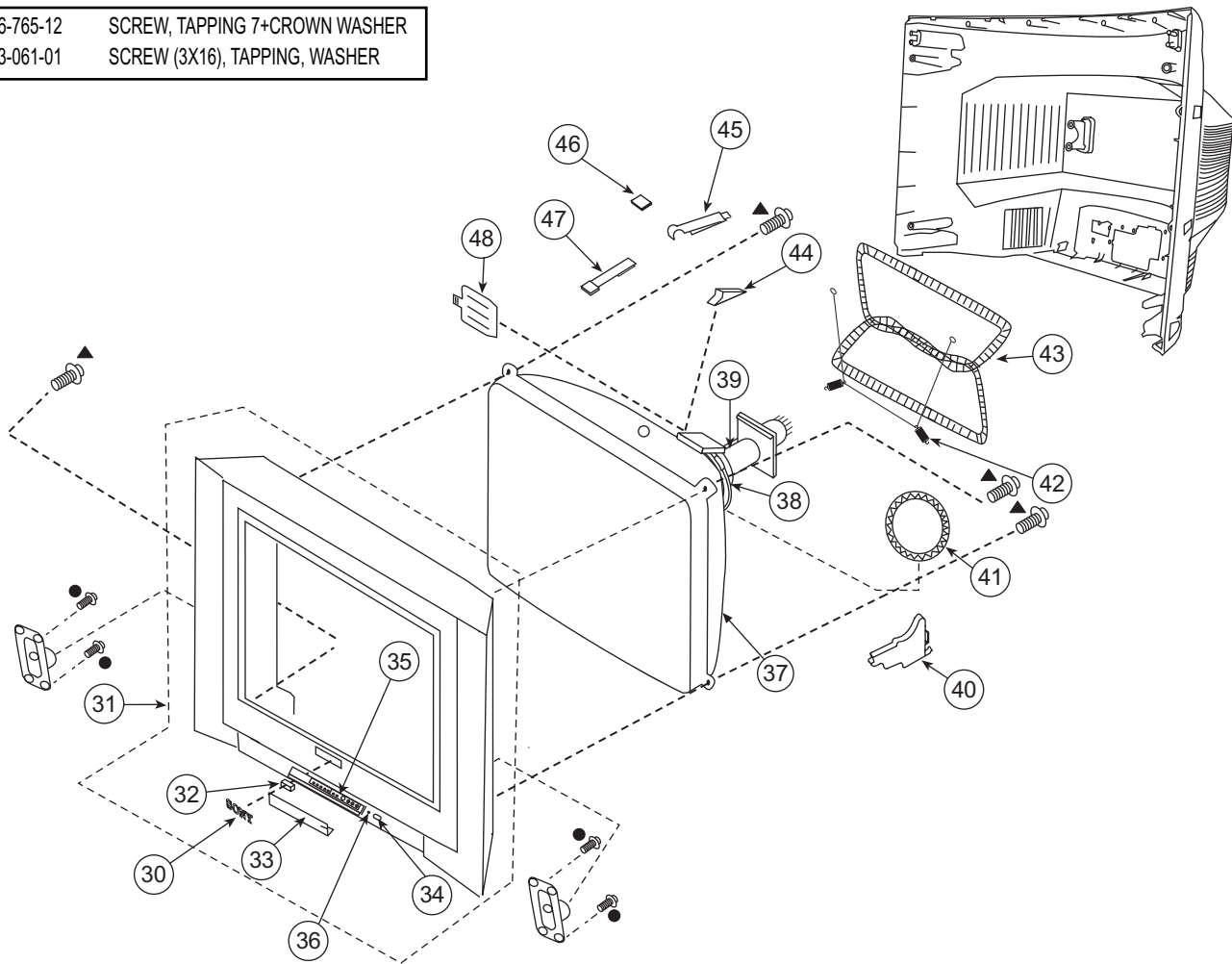







| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION | [ASSEMBLY INCLUDES] |
|----------|--|------------------------------|----------|--------------|------------------------|---------------------|
| 1 | 1-825-206-11 | LOUDSPEAKER (6X12CM) | 10 | 4-041-203-01 | HOLDER, HV CABLE | |
| * 2 | A-1401-128-A | HS (VAR) BOARD, MOUNTED | ▲ 11 | 1-453-338-11 | FBT ASSY NX-4600//X4J4 | [12-14] |
| * 3 | A-1404-728-A | V (VAR) BOARD, MOUNTED | ▲ 12 | 1-251-374-14 | CAP ASSY, HIGH-VOLTAGE | |
| * 4 | A-1300-776-A | A BOARD, COMPLETE | ▲ 13 | 1-900-800-82 | WIRE ASSY, FOCUS | |
| | The high-voltage leads associated with the FBT on the A board are not included and must be ordered separately. (See 12-14) | | ▲ 14 | 1-900-803-50 | WIRE ASSY, G2 LEAD 38V | |
| ▲ 5 | 8-598-593-50 | TUNER, FSS BTF-WA421 | * 15 | A-1401-992-A | C (VAR) BOARD, MOUNTED | |
| * 6 | A-1401-127-A | GK (VAR) BOARD, MOUNTED | * 16 | 3-696-606-02 | HINGE, VI | |
| ▲ 7 | 1-766-374-11 | PLUG, F-PIN | 17 | 4-089-051-32 | COVER, REAR | |
| ▲ 8 | 1-827-116-11 | CORD, POWER (WITH CONNECTOR) | | | | |
| | (KV-34105 ARGENTINA ONLY) | | | | | |
| ▲ 8 | 1-791-225-14 | CORD, POWER (WITH CONNECTOR) | | | | |
| | (KV-34FS105 BRAZIL ONLY) | | | | | |
| 9 | 1-500-484-21 | CLAMP, SLEEVE FERRITE | | | | |

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

6-4. PICTURE TUBE (KV-34FS105 ONLY)

-  4-046-765-12
- SCREW, TAPPING 7+CROWN WASHER
-  4-043-061-01
- SCREW (3X16), TAPPING, WASHER

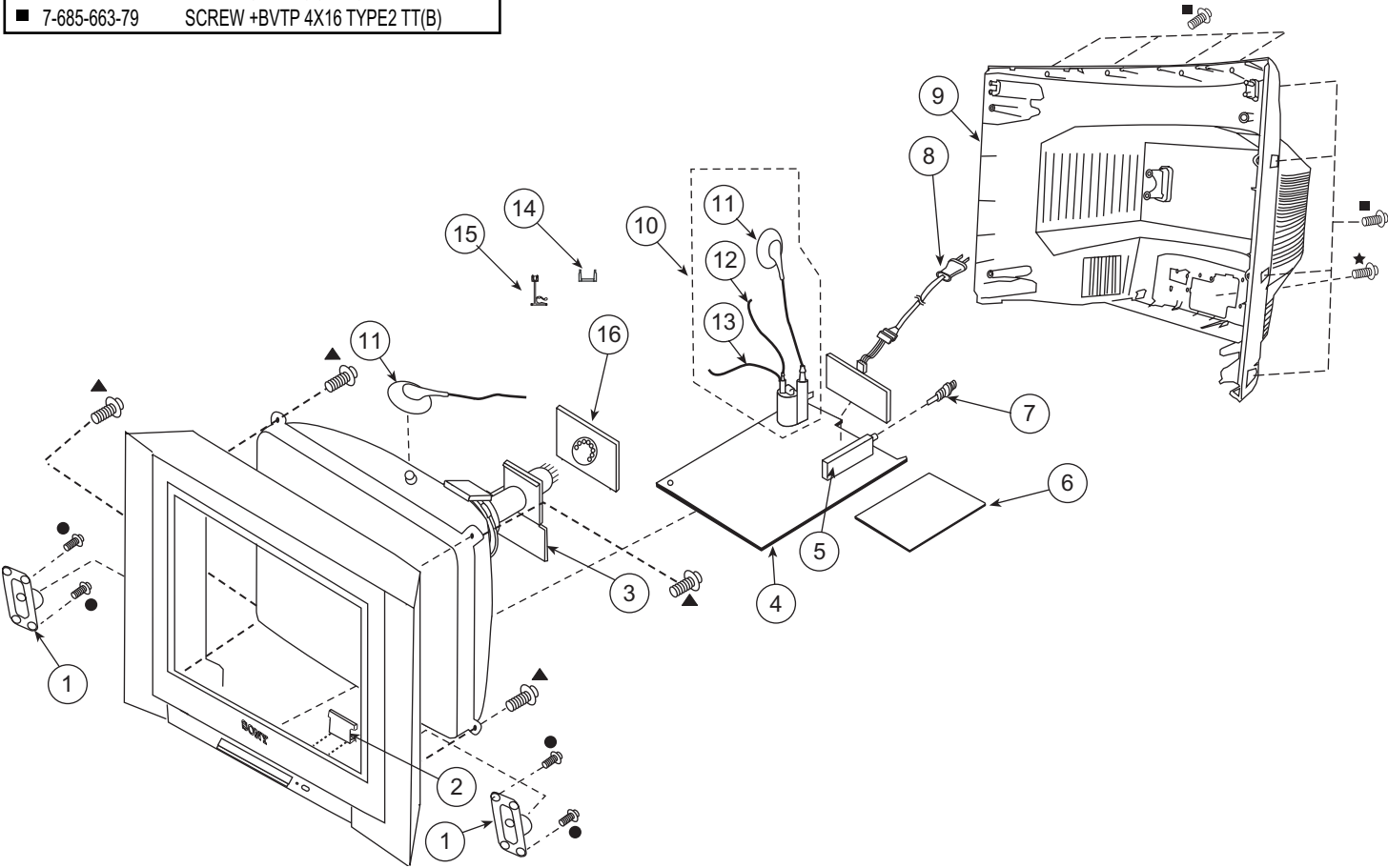


| REF. NO. | PART NO. | DESCRIPTION | [ASSEMBLY INCLUDES] | REF. NO. | PART NO. | DESCRIPTION |
|---|--------------|--|---------------------|--|--------------|----------------------------|
| 30 | 4-046-160-31 | EMBLEM, SONY NO.9 | [32-35] | 40 | 4-089-063-03 | SUPPORTER, CRT |
| 31 | X-2021-303-1 | BEZNET ASSY | |  41 | 1-452-896-11 | COIL, NA ROTATION (RT-200) |
| * 32 | 4-083-303-01 | SPRING, METAL | | 42 | 4-036-329-11 | SPRING (B), TENSION |
| 33 | 4-089-056-21 | DOOR | |  43 | 1-428-986-11 | DEGAUSSING COIL (34FW) |
| 34 | 4-089-057-21 | BUTTON, POWER | | 44 | 4-031-319-01 | SPACER, DY |
| 35 | 4-089-016-11 | LABEL, DOOR | | 45 | 4-065-895-12 | HOLDER, DGC |
| 36 | 4-089-058-11 | GUIDE, LED | | 46 | 1-452-885-11 | MAGNET, LANDING |
|  37 | 8-735-050-05 | CRT 34RSN(FOR EQUATORIAL AREA) A80LPD80X | | 47 | 4-083-414-01 | PIECE A(110), CONV CORRECT |
|  38 | 8-451-499-41 | DY Y34RSA-V | | 48 | 4-081-170-01 | PLATE, TLH CORRECTION |
|  39 | 8-453-007-41 | NECK ASSEMBLY NA324-M4 | | | | |

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

6-5. CHASSIS (KV-38FS105 ONLY)

| | | |
|---|--------------|-------------------------------|
| ▲ | 4-068-596-02 | SCREW(7X45), TAPPING |
| ● | 4-043-061-01 | SCREW (3X16), TAPPING, WASHER |
| ★ | 4-041-182-01 | SCREW (+BVTP) (3X12), TAPPING |
| ■ | 7-685-663-79 | SCREW +BVTP 4X16 TYPE2 TT(B) |



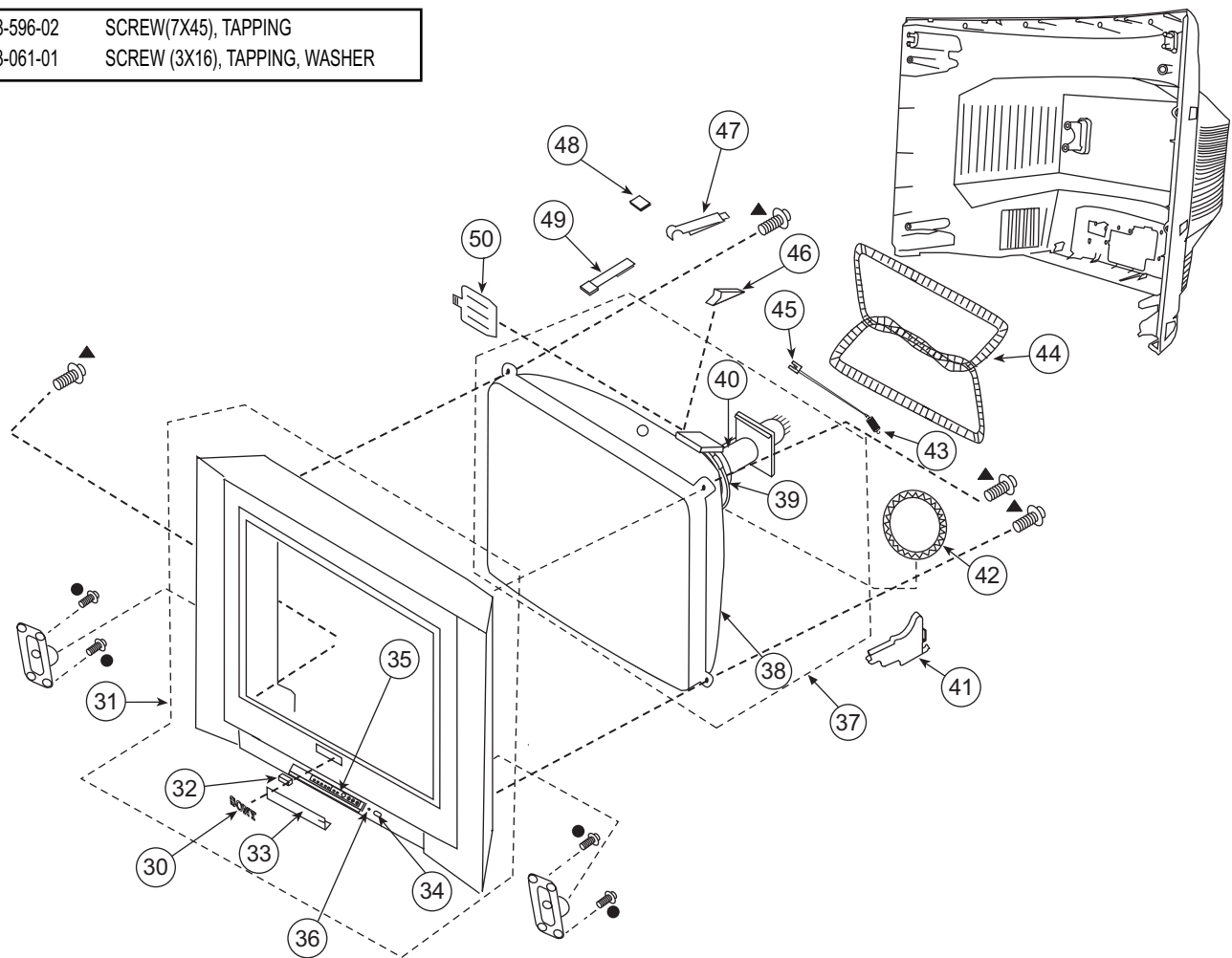
| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION | [ASSEMBLY INCLUDES] |
|--|--------------|------------------------------|----------|--------------|-------------------------|---------------------|
| 1 | 1-825-206-11 | LOUDSPEAKER (6X12CM) | ▲ 10 | 1-453-338-21 | FBT ASSY, NX-4600//X4C4 | [11-13] |
| * 2 | A-1415-671-A | HS (VAR) BOARD, MOUNTED | ▲ 11 | 1-251-715-32 | CAP ASSY, HIGH-VOLTAGE | |
| * 3 | A-1404-728-A | V (VAR) BOARD, MOUNTED | ▲ 12 | 1-900-805-19 | WIRE ASSY, FOCUS HV | |
| * 4 | A-1302-966-A | A BOARD, COMPLETE | ▲ 13 | 1-900-805-22 | CONNECTOR ASSY, G2 HV | |
| The high-voltage leads associated with the FBT on the A board are not included and must be ordered separately. (See 11-13) | | | * 14 | 4-076-951-01 | HINGE, PWB | |
| ▲ 5 | 8-598-593-50 | TUNER, FSS BTF-WA421 | 15 | 4-089-469-11 | STANDOFF, HV | |
| * 6 | A-1415-670-A | GK (VAR) BOARD, MOUNTED | * 16 | A-1401-992-A | C (VAR) BOARD, MOUNTED | |
| ▲ 7 | 1-766-374-11 | PLUG, F-PIN | | | | |
| ▲ 8 | 1-783-838-91 | CORD, POWER (WITH CONNECTOR) | | | | |
| ▲ 8 | 1-823-977-12 | CORD, POWER (WITH CONNECTOR) | | | | |
| | | (KV-38FS105 ARGENTINA ONLY) | | | | |
| | | (KV-38FS105 BRAZIL ONLY) | | | | |
| 9 | 4-089-052-21 | COVER, REAR | | | | |

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

6-6. PICTURE TUBE (KV-38FS105 ONLY)


- ▲


4-068-596-02SCREW(7X45), TAPPING
- 4-043-061-01SCREW (3X16), TAPPING, WASHER



| REF. NO. | PART NO. | DESCRIPTION | [ASSEMBLY INCLUDES] | REF. NO. | PART NO. | DESCRIPTION |
|-----------------|--------------|--------------------------------|---------------------|-----------------|--------------|------------------------------|
| 30 | 4-046-160-31 | EMBLEM, SONY NO.9 | | 41 | 4-089-064-03 | SUPPORTER, CRT |
| 31 | X-4043-144-1 | BEZNET ASSY | [32-35] | <div>⚠</div> 42 | 1-452-896-11 | COIL, NA ROTATION (RT-200) |
| <div>*</div> 32 | 4-083-303-01 | SPRING, METAL | | 43 | 4-036-329-11 | SPRING (B), TENSION |
| 33 | 4-089-056-11 | DOOR | | <div>⚠</div> 44 | 1-456-011-21 | COIL, DEGAUSSING |
| 34 | 4-089-057-11 | BUTTON, POWER | | 45 | 4-082-640-01 | HOOK, GROUND WIRE |
| 35 | 4-089-016-11 | LABEL, DOOR | | 46 | 4-053-093-01 | SPACER, DY |
| 36 | 4-089-058-11 | GUIDE, LED | | 47 | 4-065-895-12 | HOLDER, DGC |
| <div>⚠</div> 37 | 8-734-082-06 | ITC 38RSN-A1E(FOR CHILI) | [38-40] | 48 | 1-452-885-11 | MAGNET, LANDING |
| <div>⚠</div> 38 | 8-735-080-05 | CRT 38RSN(FOR EQUATORIAL AREA) | | 49 | 4-085-128-01 | PIECE A (100), CONV. CORRECT |
| <div>⚠</div> 39 | 8-451-506-22 | DY Y38RSA-V | | 50 | 2-163-920-01 | PLATE, TLH CORRECTION |
| <div>⚠</div> 40 | 8-453-007-41 | NECK ASSEMBLY NA324-M4 | | | | |

SECTION 7: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

The components in this manual identified by the following symbol:  indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.









* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

RESISTORS

- All resistors are in ohms
- F : nonflammable
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.



When ordering parts by reference number, please include the board name.

| REF. NO. | PART NO. | DESCRIPTION | VALUES | REF. NO. | PART NO. | DESCRIPTION | VALUES |
|--|---|---|--|----------|--------------|--------------|------------------|
|  | * A-1300-581-A | A BOARD, COMPLETE (KV-29FS105 ONLY) | | C015 | 1-162-975-11 | CERAMIC CHIP | 24pF 5% 50V |
| | * A-1300-776-A | A BOARD, COMPLETE (KV-34FS105 ONLY) | | C016 | 1-126-941-11 | ELECT | 470μF 20% 25V |
| | * A-1302-966-A | A BOARD, COMPLETE (KV-38FS105 ONLY) | | C017 | 1-162-966-11 | CERAMIC CHIP | 0.0022μF 10% 50V |
| | The high-voltage leads associated with the FBT on these A boards are not included and must be ordered separately. Order the following leads when requesting these A boards: | | | C018 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| |  | 1-251-374-14 | CAP ASSY, HIGH-VOLTAGE (KV-29FS105/34FS105 ONLY) | C020 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| |  | 1-251-715-32 | CAP ASSY, HIGH-VOLTAGE (KV-38FS105 ONLY) | C026 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| |  | 1-900-800-82 | WIRE ASSY, FOCUS (KV-29FS105/34FS105 ONLY) | C027 | 1-162-964-11 | CERAMIC CHIP | 0.001μF 10% 50V |
| |  | 1-900-805-19 | WIRE ASSY, FOCUS HV (KV-38FS105 ONLY) | C028 | 1-162-964-11 | CERAMIC CHIP | 0.001μF 10% 50V |
| |  | 1-900-803-22 | WIRE ASSY, G2 LEAD (KV-29FS105 ONLY) | C029 | 1-126-960-11 | ELECT | 1μF 20% 50V |
| |  | 1-900-803-50 | WIRE ASSY, G2 LEAD 38V (KV-34FS105 ONLY) | C030 | 1-165-176-11 | CERAMIC CHIP | 0.047μF 10% 16V |
|  | 1-900-805-22 | CONNECTOR ASSY, G2 HV (KV-38FS105 ONLY) | | C031 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| | 4-382-854-11 | SCREW (M3X10), P, SW (+) | | C032 | 1-126-964-11 | ELECT | 10μF 20% 50V |
| CAPACITOR | | | | C033 | 1-125-837-91 | CERAMIC CHIP | 1μF 10% 6.3V |
| C001 | 1-164-315-11 | CERAMIC CHIP | 470pF 5% 50V | C034 | 1-162-964-11 | CERAMIC CHIP | 0.001μF 10% 50V |
| C002 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V | C036 | 1-162-964-11 | CERAMIC CHIP | 0.001μF 10% 50V |
| C003 | 1-107-826-11 | CERAMIC CHIP | 0.1μF 10% 16V | C037 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| C004 | 1-126-947-11 | ELECT | 47μF 20% 35V | C038 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| C005 | 1-164-739-11 | CERAMIC CHIP | 560pF 5% 50V | C039 | 1-162-964-11 | CERAMIC CHIP | 0.001μF 10% 50V |
| C006 | 1-162-964-11 | CERAMIC CHIP | 0.001μF 10% 50V | C041 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| C007 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V | C043 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| C008 | 1-126-960-11 | ELECT | 1μF 20% 50V | C044 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |
| C009 | 1-162-964-11 | CERAMIC CHIP | 0.001μF 10% 50V | C045 | 1-126-964-11 | ELECT | 10μF 20% 50V |
| C014 | 1-162-975-11 | CERAMIC CHIP | 24pF 5% 50V | C046 | 1-126-964-11 | ELECT | 10μF 20% 50V |
| | | | | C047 | 1-126-941-11 | ELECT | 470μF 20% 25V |
| | | | | C048 | 1-115-416-11 | CERAMIC CHIP | 0.001μF 5% 25V |
| | | | | C049 | 1-126-964-11 | ELECT | 10μF 20% 50V |
| | | | | C050 | 1-126-941-11 | ELECT | 470μF 20% 25V |
| | | | | C051 | 1-126-947-11 | ELECT | 47μF 20% 35V |
| | | | | C052 | 1-162-968-11 | CERAMIC CHIP | 0.0047μF 10% 50V |
| | | | | C053 | 1-135-834-91 | CERAMIC CHIP | 2.2μF 6.3V |
| | | | | C054 | 1-126-963-11 | ELECT | 4.7μF 20% 50V |
| | | | | C055 | 1-126-933-11 | ELECT | 100μF 20% 16V |
| | | | | C056 | 1-135-834-91 | CERAMIC CHIP | 2.2μF 6.3V |
| | | | | C057 | 1-135-834-91 | CERAMIC CHIP | 2.2μF 6.3V |
| | | | | C060 | 1-164-230-11 | CERAMIC CHIP | 220pF 5% 50V |



| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|----------|--------------|--------------|---------|--------|------|---------------------------|--------------|--------------|----------|-----|------|
| C062 | 1-125-837-91 | CERAMIC CHIP | 1μF | 10% | 6.3V | C343 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V |
| C066 | 1-164-230-11 | CERAMIC CHIP | 220pF | 5% | 50V | C344 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C101 | 1-115-416-11 | CERAMIC CHIP | 0.001μF | 5% | 25V | C345 | 1-113-619-11 | CERAMIC CHIP | 0.47μF | | 10V |
| C102 | 1-115-416-11 | CERAMIC CHIP | 0.001μF | 5% | 25V | C346 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | | 25V |
| C120 | 1-162-915-11 | CERAMIC CHIP | 10pF | 0.50pF | 50V | (KV-34FS105 ONLY) | | | | | |
| C121 | 1-162-915-11 | CERAMIC CHIP | 10pF | 0.50pF | 50V | C348 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C122 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C349 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C200 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C350 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C201 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C352 | 1-126-947-11 | ELECT | 47μF | 20% | 35V |
| C202 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C353 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V |
| C203 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C354 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C206 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C355 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C207 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C356 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C208 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C357 | 1-126-960-11 | ELECT | 1μF | 20% | 50V |
| C209 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C358 | 1-162-968-11 | CERAMIC CHIP | 0.0047μF | 10% | 50V |
| C212 | 1-126-963-11 | ELECT | 4.7μF | 20% | 50V | C359 | 1-162-961-11 | CERAMIC CHIP | 330pF | 10% | 50V |
| C213 | 1-126-963-11 | ELECT | 4.7μF | 20% | 50V | C360 | 1-126-960-11 | ELECT | 1μF | 20% | 50V |
| C302 | 1-126-963-11 | ELECT | 4.7μF | 20% | 50V | C364 | 1-162-923-11 | CERAMIC CHIP | 47pF | 5% | 50V |
| C303 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C365 | 1-162-117-00 | CERAMIC | 100pF | 10% | 500V |
| C304 | 1-113-619-11 | CERAMIC CHIP | 0.47μF | | 10V | C366 | 1-113-619-11 | CERAMIC CHIP | 0.47μF | | 10V |
| C309 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C367 | 1-113-619-11 | CERAMIC CHIP | 0.47μF | | 10V |
| C311 | 1-126-947-11 | ELECT | 47μF | 20% | 35V | C368 | 1-113-619-11 | CERAMIC CHIP | 0.47μF | | 10V |
| C313 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C372 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C317 | 1-162-917-11 | CERAMIC CHIP | 15pF | 5% | 50V | C373 | 1-162-964-11 | CERAMIC CHIP | 0.001μF | 10% | 50V |
| C318 | 1-126-933-11 | ELECT | 100μF | 20% | 16V | C374 | 1-126-933-11 | ELECT | 100μF | 20% | 16V |
| C319 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C375 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C320 | 1-126-959-11 | ELECT | 0.47μF | 20% | 50V | C376 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V |
| C321 | 1-126-947-11 | ELECT | 47μF | 20% | 35V | C377 | 1-162-963-11 | CERAMIC CHIP | 680pF | 10% | 50V |
| C322 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C378 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C325 | 1-162-923-11 | CERAMIC CHIP | 47pF | 5% | 50V | C379 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C326 | 1-164-373-11 | CERAMIC CHIP | 0.033μF | | 25V | C380 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C327 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C381 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C330 | 1-126-964-11 | ELECT | 10μF | 20% | 50V | C382 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C332 | 1-162-917-11 | CERAMIC CHIP | 15pF | 5% | 50V | C383 | 1-126-927-11 | ELECT | 2200μF | | 10V |
| C333 | 1-126-963-11 | ELECT | 4.7μF | 20% | 50V | (KV-29FS105/34FS105 ONLY) | | | | | |
| C334 | 1-162-918-11 | CERAMIC CHIP | 18pF | 5% | 50V | C383 | 1-126-933-11 | ELECT | 100μF | 20% | 16V |
| C335 | 1-162-918-11 | CERAMIC CHIP | 18pF | 5% | 50V | (KV-38FS105 ONLY) | | | | | |
| C336 | 1-162-918-11 | CERAMIC CHIP | 18pF | 5% | 50V | C384 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C337 | 1-164-230-11 | CERAMIC CHIP | 220pF | 5% | 50V | C385 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C338 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V | C387 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C339 | 1-127-715-91 | CERAMIC CHIP | 0.22μF | 10% | 16V | C388 | 1-126-933-11 | ELECT | 100μF | 20% | 16V |
| C340 | 1-126-767-11 | ELECT | 1000μF | 20% | 16V | C389 | 1-162-970-11 | CERAMIC CHIP | 0.01μF | 10% | 25V |
| C341 | 1-126-947-11 | ELECT | 47μF | 20% | 35V | C390 | 1-126-933-11 | ELECT | 100μF | 20% | 16V |
| | | | | | | C393 | 1-107-826-11 | CERAMIC CHIP | 0.1μF | 10% | 16V |
| | | | | | | C394 | 1-125-891-11 | CERAMIC CHIP | 0.47μF | 10% | 10V |

NOTE: The components identified by shading and Δ mark are critical for safety. Replace only with part number specified.



| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|---------------|---------------------------|--------------|----------------|-----|-------|---------------|---------------------------|--------------|----------------|-----|------|
| C396 | 1-162-917-11 | CERAMIC CHIP | 15pF | 5% | 50V | Δ C514 | 1-109-844-11 | FILM | 0.68 μ F | 5% | 400V |
| C401 | 1-162-969-11 | CERAMIC CHIP | 0.0068 μ F | 10% | 25V | Δ C514 | (KV-29FS105 ONLY) | | | | |
| C402 | 1-164-227-11 | CERAMIC CHIP | 0.022 μ F | 10% | 25V | Δ C514 | 1-115-521-11 | FILM | 0.82 μ F | 5% | 250V |
| C403 | 1-162-967-11 | CERAMIC CHIP | 0.0033 μ F | 10% | 50V | | (KV-34FS105/38FS105 ONLY) | | | | |
| C404 | 1-162-967-11 | CERAMIC CHIP | 0.0033 μ F | 10% | 50V | C515 | 1-104-987-11 | MYLAR | 0.001 μ F | 5% | 200V |
| C405 | 1-164-677-11 | CERAMIC CHIP | 0.033 μ F | 10% | 16V | Δ C516 | 1-115-521-11 | FILM | 0.82 μ F | 5% | 250V |
| C406 | 1-164-677-11 | CERAMIC CHIP | 0.033 μ F | 10% | 16V | | (KV-29FS105 ONLY) | | | | |
| C407 | 1-162-965-11 | CERAMIC CHIP | 0.0015 μ F | 10% | 50V | Δ C516 | 1-115-356-11 | FILM | 1.2 μ F | 5% | 250V |
| C408 | 1-162-965-11 | CERAMIC CHIP | 0.0015 μ F | 10% | 50V | | (KV-34FS105/38FS105 ONLY) | | | | |
| C409 | 1-127-715-91 | CERAMIC CHIP | 0.22 μ F | 10% | 16V | C517 | 1-107-649-11 | ELECT | 2.2 μ F | 20% | 250V |
| C410 | 1-127-715-91 | CERAMIC CHIP | 0.22 μ F | 10% | 16V | C518 | 1-106-387-00 | MYLAR | 0.068 μ F | 10% | 200V |
| C411 | 1-128-934-91 | CERAMIC CHIP | 0.33 μ F | 20% | 10V | C519 | 1-102-244-00 | CERAMIC | 220pF | 10% | 500V |
| C412 | 1-126-961-11 | ELECT | 2.2 μ F | 20% | 50V | C520 | 1-164-646-11 | CERAMIC | 2200pF | 10% | 500V |
| C413 | 1-126-960-11 | ELECT | 1 μ F | 20% | 50V | C521 | 1-162-964-11 | CERAMIC CHIP | 0.001 μ F | 10% | 50V |
| C414 | 1-126-960-11 | ELECT | 1 μ F | 20% | 50V | C522 | 1-126-960-11 | ELECT | 1 μ F | 20% | 50V |
| C415 | 1-126-960-11 | ELECT | 1 μ F | 20% | 50V | C525 | 1-102-244-00 | CERAMIC | 220pF | 10% | 500V |
| C416 | 1-126-960-11 | ELECT | 1 μ F | 20% | 50V | C526 | 1-107-662-11 | ELECT | 22 μ F | 20% | 350V |
| C417 | 1-115-416-11 | CERAMIC CHIP | 0.001 μ F | 5% | 25V | Δ C527 | 1-162-116-00 | CERAMIC | 680pF | 10% | 2KV |
| C418 | 1-126-963-11 | ELECT | 4.7 μ F | 20% | 50V | C528 | 1-162-966-11 | CERAMIC CHIP | 0.0022 μ F | 10% | 50V |
| C420 | 1-126-960-11 | ELECT | 1 μ F | 20% | 50V | C529 | 1-104-662-91 | ELECT | 22 μ F | 20% | 25V |
| C422 | 1-126-768-11 | ELECT | 2200 μ F | 20% | 16V | C530 | 1-130-475-00 | MYLAR | 0.0022 μ F | 5% | 50V |
| C501 | 1-102-110-00 | CERAMIC | 220pF | 10% | 50V | Δ C531 | 1-126-965-91 | ELECT | 22 μ F | 20% | 50V |
| C502 | 1-126-959-11 | ELECT | 0.47 μ F | 20% | 50V | Δ C532 | 1-126-965-91 | ELECT | 22 μ F | 20% | 50V |
| C503 | 1-164-315-11 | CERAMIC CHIP | 470pF | 5% | 50V | C534 | 1-126-967-11 | ELECT | 47 μ F | 20% | 50V |
| C504 | 1-102-228-00 | CERAMIC | 470pF | 10% | 500V | Δ C535 | 1-164-360-11 | CERAMIC CHIP | 0.1 μ F | | 16V |
| C505 | 1-102-228-00 | CERAMIC | 470pF | 10% | 500V | C537 | 1-126-941-11 | ELECT | 470 μ F | 20% | 25V |
| C506 | 1-106-383-00 | MYLAR | 0.047 μ F | 10% | 200V | C539 | 1-126-941-11 | ELECT | 470 μ F | 20% | 25V |
| Δ C507 | 1-162-116-00 | CERAMIC | 680pF | 10% | 2KV | C540 | 1-131-867-51 | ELECT | 100 μ F | | 160V |
| C508 | 1-102-228-00 | CERAMIC | 470pF | 10% | 500V | C541 | 1-128-560-11 | ELECT | 22 μ F | 20% | 100V |
| Δ C509 | 1-162-116-00 | CERAMIC | 680pF | 10% | 2KV | C542 | 1-102-244-00 | ELECT | 220pF | 20% | 500V |
| Δ C510 | 1-137-150-11 | FILM | 0.01 μ F | 5% | 100V | | (KV-29FS105 ONLY) | | | | |
| Δ C511 | 1-136-086-00 | FILM | 17000pF | 3% | 1.2KV | C544 | 1-129-718-00 | FILM | 0.022 μ F | 5% | 630V |
| Δ C511 | 1-117-652-11 | FILM | 22000pF | 3% | 1.2KV | C545 | 1-106-387-00 | MYLAR | 0.068 μ F | 10% | 200V |
| | (KV-34FS105/38FS105 ONLY) | | | | | C546 | 1-104-987-11 | MYLAR | 0.001 μ F | 5% | 200V |
| C512 | 1-129-709-91 | FILM | 0.0039 μ F | 10% | 630V | | (KV-34FS105/38FS105 ONLY) | | | | |
| | (KV-29FS105 ONLY) | | | | | C547 | 1-104-987-11 | MYLAR | 0.001 μ F | 5% | 200V |
| C512 | 1-129-928-00 | FILM | 0.0027 μ F | 10% | 630V | | (KV-34FS105/38FS105 ONLY) | | | | |
| | (KV-34FS105/38FS105 ONLY) | | | | | C550 | 1-102-002-00 | CERAMIC | 680pF | 10% | 500V |
| Δ C513 | 1-129-722-00 | FILM | 0.0471 μ F | 5% | 630V | | (KV-29FS105 ONLY) | | | | |
| Δ C513 | 1-130-118-91 | FILM | 0.051 μ F | 5% | 400V | C550 | 1-164-645-11 | CERAMIC | 1000pF | 10% | 500V |
| | (KV-34FS105/38FS105 ONLY) | | | | | | (KV-34FS105/38FS105 ONLY) | | | | |
| | | | | | | C551 | 1-109-954-11 | ELECT | 0.47 μ F | 20% | 160V |
| | | | | | | C552 | 1-102-244-00 | CERAMIC | 220pF | 10% | 500V |

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| REF. NO. | PART NO. | DESCRIPTION | VALUES | REF. NO. | PART NO. | DESCRIPTION | VALUES |
|------------------|--------------|-----------------------------------|----------------------|------------------|--------------|-------------|-------------|
| \triangle C553 | 1-117-412-11 | FILM (KV-29FS105 ONLY) | 0.24 μ F 5% 250V | D100 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| \triangle C553 | 1-117-661-11 | FILM (KV-34FS105/38FS105 ONLY) | 0.15 μ F 5% 250V | D101 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| \triangle C554 | 1-117-629-11 | FILM (KV-29FS105 ONLY) | 2700pF 3% 1.2KV | D102 | 8-719-109-85 | DIODE | RD5.1ESB2 |
| \triangle C554 | 1-117-635-11 | FILM (KV-34FS105/38FS105 ONLY) | 4700pF 3% 1.2KV | D110 | 8-719-991-33 | DIODE | 1SS133T-77 |
| C561 | 1-126-967-11 | ELECT | 47 μ F 20% 50V | D111 | 8-719-109-93 | DIODE | RD6.2ESB2 |
| C563 | 1-104-666-11 | ELECT | 220 μ F 20% 25V | D112 | 8-719-109-93 | DIODE | RD6.2ESB2 |
| C564 | 1-126-960-11 | ELECT | 1 μ F 20% 50V | D113 | 8-719-921-44 | DIODE | MTZJ-5.1C |
| C565 | 1-126-969-11 | ELECT | 220 μ F 20% 50V | D200 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C568 | 1-137-190-91 | FILM | 0.22 μ F 5% 50V | D201 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C571 | 1-126-942-61 | ELECT | 1000 μ F 20% 25V | D209 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C572 | 1-126-942-61 | ELECT | 1000 μ F 20% 25V | D210 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C573 | 1-104-665-11 | ELECT | 100 μ F 20% 25V | D211 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| \triangle C590 | 1-126-964-11 | ELECT | 10 μ F 20% 50V | D212 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C1501 | 1-107-846-11 | FILM (KV-34FS105/38FS105 ONLY) | 0.1 μ F 5% 400V | D218 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C6001 | 1-126-940-11 | ELECT | 330 μ F 20% 25V | D219 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C6002 | 1-126-947-11 | ELECT | 47 μ F 20% 35V | D303 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| C6003 | 1-125-837-91 | CERAMIC CHIP | 1 μ F 10% 6.3V | D304 | 8-719-921-44 | DIODE | MTZJ-5.1C |
| C6005 | 1-126-768-11 | ELECT | 2200 μ F 20% 16V | D305 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| CONNECTOR | | | | D306 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| * CN001 | 1-560-124-00 | PLUG, CONNECTOR (2.5MM) | 4P | D307 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| * CN003 | 1-564-509-11 | PLUG, CONNECTOR | 6P | D309 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| * CN004 | 1-564-507-11 | PLUG, CONNECTOR | 4P | D310 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| * CN501 | 1-580-798-11 | CONNECTOR PIN (DY) | 6P | D311 | 8-719-929-15 | DIODE | HZS9.1NB2 |
| * CN503 | 1-564-510-11 | PLUG, CONNECTOR | 7P | D313 | 8-719-108-12 | DIODE | RD9.1EW |
| * CN504 | 1-564-509-11 | PLUG, CONNECTOR | 6P | D314 | 8-719-108-12 | DIODE | RD9.1EW |
| * CN505 | 1-564-510-11 | PLUG, CONNECTOR | 7P | D410 | 8-719-404-50 | DIODE | MA111-TX |
| CN600 | 1-695-915-11 | TAB (CONTACT) | | D412 | 8-719-404-50 | DIODE | MA111-TX |
| * CN906 | 1-564-506-11 | PLUG, CONNECTOR | 3P | D413 | 8-719-921-63 | DIODE | MTZJ-7.5B |
| DIODE | | | | D415 | 8-719-991-33 | DIODE | 1SS133T-77 |
| D002 | 8-719-109-93 | DIODE | RD6.2ESB2 | D501 | 8-719-109-89 | DIODE | RD5.6ESB2 |
| D004 | 8-719-921-44 | DIODE | MTZJ-5.1C | D502 | 8-719-081-00 | DIODE | BY228/A52A/ |
| D005 | 8-719-110-17 | DIODE | RD10ESB2 | \triangle D503 | 8-719-081-00 | DIODE | BY228/A52A/ |
| D006 | 8-719-110-17 | DIODE | RD10ESB2 | D504 | 6-500-485-01 | DIODE | FR305G-EB |
| D007 | 8-719-404-50 | DIODE | MA111-TX | D505 | 8-719-908-03 | DIODE | GP08D |
| D008 | 8-719-404-50 | DIODE | MA111-TX | D506 | 8-719-908-03 | DIODE | GP08D |
| D009 | 8-719-982-22 | DIODE | MTZJ-30D | D507 | 8-719-991-33 | DIODE | 1SS133T-77 |
| D010 | 8-719-109-93 | DIODE | RD6.2ESB2 | \triangle D508 | 8-719-991-33 | DIODE | 1SS133T-77 |
| | | | | D510 | 8-719-081-93 | DIODE | 1N4937/23 |
| | | | | D511 | 8-719-970-87 | DIODE | ERA38-06 |
| | | | | D512 | 8-719-970-87 | DIODE | ERA38-06 |
| | | | | D513 | 8-719-110-41 | DIODE | RD15ESB2 |
| | | | | \triangle D515 | 8-719-075-41 | DIODE | PR1004GT |

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| REF. NO. | PART NO. | DESCRIPTION | VALUES | REF. NO. | PART NO. | DESCRIPTION | VALUES |
|---------------------|---------------------------|------------------|-----------------|-----------------------|--------------|-------------------|-------------|
| D516 | 8-719-991-33 | DIODE | 1SS133T-77 | JACK | | | |
| D518 | 8-719-991-33 | DIODE | 1SS133T-77 | J201 | 1-794-119-11 | TERMINAL BLOCK, S | 4P |
| \triangle D519 | 8-719-302-43 | DIODE | EL1Z | J203 | 1-794-118-11 | JACK BLOCK, PIN | 3P |
| \triangle D520 | 8-719-991-33 | DIODE | 1SS133T-77 | J205 | 1-794-116-11 | JACK BLOCK, PIN | 2P |
| D521 | 8-719-921-63 | DIODE | MTZJ-7.5B | J206 | 1-794-117-11 | JACK BLOCK, PIN | 3P |
| \triangle D522 | 8-719-991-33 | DIODE | 1SS133T-77 | J207 | 1-794-116-11 | JACK BLOCK, PIN | 2P |
| D523 | 8-719-109-69 | DIODE | RD3.6ESB2 | CHIP CONDUCTOR | | | |
| D524 | 8-719-109-97 | DIODE | RD6.8ESB2 | JR1 | 1-216-864-11 | SHORT CHIP | |
| \triangle D530 | 6-500-531-01 | DIODE | PG154R | JR2 | 1-216-864-11 | SHORT CHIP | |
| D531 | 6-500-531-01 | DIODE | PG154R | JR4 | 1-216-864-11 | SHORT CHIP | |
| D534 | 8-719-074-25 | DIODE | PG104R | JR8 | 1-216-864-11 | SHORT CHIP | |
| D535 | 8-719-404-50 | DIODE | MA111-TX | JR9 | 1-216-864-11 | SHORT CHIP | |
| D536 | 1-216-864-11 | SHORT CHIP | | JR12 | 1-216-864-11 | SHORT CHIP | |
| D561 | 8-719-075-33 | DIODE | 1N4003GA | JR13 | 1-216-864-11 | SHORT CHIP | |
| \triangle D580 | 8-719-991-33 | DIODE | 1SS133T-77 | JR14 | 1-216-864-11 | SHORT CHIP | |
| D590 | 8-719-991-33 | DIODE | 1SS133T-77 | JR15 | 1-216-864-11 | SHORT CHIP | |
| FERRITE BEAD | | | | JR16 | 1-216-864-11 | SHORT CHIP | |
| FB301 | 1-412-911-11 | FERRITE | 0 μ H | JR17 | 1-216-864-11 | SHORT CHIP | |
| FB302 | 1-414-234-22 | FERRITE | 0 μ H | JR205 | 1-216-864-11 | SHORT CHIP | |
| FB501 | 1-410-397-21 | FERRITE | 1.1 μ H | JR206 | 1-216-864-11 | SHORT CHIP | |
| FB502 | 1-410-397-21 | FERRITE | 1.1 μ H | JR301 | 1-216-864-11 | SHORT CHIP | |
| FB503 | 1-410-397-21 | FERRITE | 1.1 μ H | JR302 | 1-216-864-11 | SHORT CHIP | |
| FB504 | 1-410-397-21 | FERRITE | 1.1 μ H | JR303 | 1-216-864-11 | SHORT CHIP | |
| FB505 | 1-410-397-21 | FERRITE | 1.1 μ H | JR304 | 1-216-864-11 | SHORT CHIP | |
| FILTER | | | | JR305 | 1-216-864-11 | SHORT CHIP | |
| FL301 | 1-239-847-11 | FILTER, LOW PASS | | JR306 | 1-216-864-11 | SHORT CHIP | |
| FL302 | 1-239-847-11 | FILTER, LOW PASS | | JR307 | 1-216-864-11 | SHORT CHIP | |
| FL303 | 1-239-847-11 | FILTER, LOW PASS | | JR309 | 1-216-864-11 | SHORT CHIP | |
| IC | | | | JR401 | 1-216-864-11 | SHORT CHIP | |
| IC001 | 6-802-547-01 | IC | M306V5ME-118SP | JR402 | 1-216-864-11 | SHORT CHIP | |
| IC002 | 6-701-929-01 | IC | BD4743G-TR | JR403 | 1-216-864-11 | SHORT CHIP | |
| IC003 | 6-704-004-01 | IC | BR24L16F-WE2 | JR415 | 1-216-864-11 | SHORT CHIP | |
| IC301 | 8-752-107-35 | IC | CXA2155S | JR420 | 1-216-864-11 | SHORT CHIP | |
| IC302 | 6-701-597-01 | IC | TC90A69N | JR421 | 1-216-864-11 | SHORT CHIP | |
| IC400 | 6-703-191-01 | IC | NJW1135AGK1-TE2 | JR423 | 1-216-864-11 | SHORT CHIP | |
| IC501 | 8-759-700-07 | IC | NJM2903M | JR500 | 1-216-864-11 | SHORT CHIP | |
| \triangle IC561 | 8-759-980-58 | IC | TDA8172 | COIL | | | |
| | (KV-29FS105 ONLY) | | | L001 | 1-414-857-11 | INDUCTOR | 100 μ H |
| \triangle IC561 | 8-759-696-71 | IC | STV9379A | L002 | 1-414-857-11 | INDUCTOR | 100 μ H |
| | (KV-34FS105/38FS105 ONLY) | | | L003 | 1-414-856-11 | INDUCTOR | 10 μ H |
| IC6008 | 6-701-752-01 | IC | NJM2930F05B | L004 | 1-414-857-11 | INDUCTOR | 100 μ H |
| | | | | L009 | 1-414-857-11 | INDUCTOR | 100 μ H |



NOTE: The components identified by shading and mark are critical for safety. Replace only with part number specified.




| REF. NO. | PART NO. | DESCRIPTION | VALUES | REF. NO. | PART NO. | DESCRIPTION | VALUES |
|----------|---------------------------|-------------|--------|----------|--------------|-------------|----------------|
| L010 | 1-414-182-11 | INDUCTOR | 6.8μH | Q402 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| L300 | 1-414-857-11 | INDUCTOR | 100μH | Q403 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| L301 | 1-414-857-11 | INDUCTOR | 100μH | Q407 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| L302 | 1-414-856-11 | INDUCTOR | 10μH | | | | |
| L303 | 1-410-478-11 | INDUCTOR | 47μH | Q500 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| | | | | Q501 | 8-729-140-50 | TRANSISTOR | 2SC3209LK |
| L304 | 1-410-470-11 | INDUCTOR | 10μH | ⚠ Q502 | 6-550-107-01 | TRANSISTOR | 2SD2645-YB |
| L305 | 1-410-470-11 | INDUCTOR | 10μH | Q507 | 8-729-043-95 | TRANSISTOR | 2SC3840(3) |
| L306 | 1-410-470-11 | INDUCTOR | 10μH | ⚠ Q511 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 |
| L307 | 1-410-470-11 | INDUCTOR | 10μH | | | | |
| L310 | 1-410-470-11 | INDUCTOR | 10μH | ⚠ Q512 | 8-729-053-87 | TRANSISTOR | KTC4370A |
| | | | | ⚠ Q530 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| L501 | 1-406-677-11 | INDUCTOR | 10MH | ⚠ Q531 | 8-729-424-02 | TRANSISTOR | 2SB709A-QRS-TX |
| L502 | 1-412-552-81 | INDUCTOR | 2.2MH | ⚠ Q532 | 6-550-362-01 | TRANSISTOR | KTA1279 |
| L503 | 1-406-677-11 | INDUCTOR | 10MH | Q561 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| L504 | 1-406-677-11 | INDUCTOR | 10MH | | | | |
| ⚠ L505 | 1-419-714-11 | INDUCTOR | 100μH | Q562 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 |
| | (KV-29FS105 ONLY) | | | ⚠ Q590 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| ⚠ L505 | 1-406-978-11 | INDUCTOR | 150μH | Q6000 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q |
| | (KV-34FS105/38FS105 ONLY) | | | | | | |
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| L511 | 1-409-955-31 | INDUCTOR | 8MH | | | | |
| L517 | 1-412-552-81 | INDUCTOR | 2.2MH | | | | |
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



| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|---|--------------|-------------|--------|----|-------|----------|--------------|--------------|--------|----|-------|
| R030 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | R107 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R032 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | R108 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R033 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | R110 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R034 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | R111 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R035 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | R113 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R037 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R120 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R038 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | R121 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R039 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R122 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R048 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R133 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R050 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R134 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R051 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W | R135 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R052 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W | R136 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R053 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W | R137 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R054 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | R140 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R055 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | R145 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W |
| R056 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | R201 | 1-216-864-11 | SHORT CHIP | | | |
| R057 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W | R202 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R058 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W | R203 | 1-216-864-11 | SHORT CHIP | | | |
| R060 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W | R206 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R061 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | R207 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
|  R063 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R208 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R064 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | R209 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R065 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | R210 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R066 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | R217 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R068 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R218 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R070 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | R219 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R071 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | R220 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R073 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | R222 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R074 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | R223 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R075 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | R224 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R076 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | R225 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R077 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R232 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R078 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | R233 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
|  R080 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R234 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R085 | 1-215-924-00 | METAL OXIDE | 15K | 5% | 3W | R235 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R086 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W | R300 | 1-113-619-11 | CERAMIC CHIP | 0.47μF | | 10V |
| R087 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W | R301 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R089 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R302 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R098 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W | R303 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R099 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R306 | 1-216-843-11 | METAL CHIP | 68K | 5% | 1/10W |
| R101 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R308 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R102 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R311 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R103 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | | | | | | |

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
















| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|----------|---------------------------|-------------|--------|-------|-------|--|---------------------------|-------------|--------|----|-------|
| R314 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | R356 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R315 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R359 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R316 | 1-216-830-11 | METAL CHIP | 5.6K | 5% | 1/10W | R365 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W |
| R317 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W | R367 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R318 | 1-216-864-11 | SHORT CHIP | | | | R369 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R319 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R370 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R320 | 1-216-864-11 | SHORT CHIP | | | | R371 | 1-216-864-11 | SHORT CHIP | | | |
| R321 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | R372 | 1-216-864-11 | SHORT CHIP | | | |
| R322 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R373 | 1-216-864-11 | SHORT CHIP | | | |
| R323 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W | R374 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R325 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | R376 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R328 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R378 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R330 | 1-216-815-11 | METAL CHIP | 330 | 5% | 1/10W | R379 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R331 | 1-218-716-11 | METAL CHIP | 10K | 0.50% | 1/10W | R380 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R332 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R381 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R333 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R382 | 1-216-834-11 | METAL CHIP | 12K | 5% | 1/10W |
| R334 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W | R383 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R335 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W | R384 | 1-216-840-11 | METAL CHIP | 39K | 5% | 1/10W |
| R336 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R386 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R337 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | R387 | 1-216-864-11 | SHORT CHIP | | | |
| R338 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | R388 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R339 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W | R389 | 1-216-864-11 | SHORT CHIP | | | |
| | (KV-29FS105 ONLY) | | | | | R390 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R339 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W | R391 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| | (KV-34FS105/38FS105 ONLY) | | | | | R393 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R340 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/10W | | | | | | |
| | (KV-29FS105 ONLY) | | | | | R394 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R340 | 1-216-863-11 | METAL CHIP | 3.3M | 5% | 1/10W | R401 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| | (KV-34FS105/38FS105 ONLY) | | | | | R403 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R341 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W | R405 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| | (KV-29FS105 ONLY) | | | | | R408 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R341 | 1-216-851-11 | METAL CHIP | 330K | 5% | 1/10W | | | | | | |
| | (KV-34FS105/38FS105 ONLY) | | | | | R409 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R342 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W | R411 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R343 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R412 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R344 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W | R413 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R345 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W | R414 | 1-216-864-11 | SHORT CHIP | | | |
| R347 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | R415 | 1-216-864-11 | SHORT CHIP | | | |
| R348 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | R416 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R349 | 1-216-864-11 | SHORT CHIP | | | | R501 | 1-216-815-11 | METAL CHIP | 330 | 5% | 1/10W |
| R350 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | | (KV-29FS105 ONLY) | | | | |
| R351 | 1-216-864-11 | SHORT CHIP | | | | R501 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R352 | 1-216-864-11 | SHORT CHIP | | | | | (KV-34FS105/38FS105 ONLY) | | | | |
| | | | | | | R502 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| | | | | | |  R503 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

A component identified by this  symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.




| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|---|--------------|--|--------|-------|-------|--|--------------|--|--------|----|-------|
| R504 | 1-215-885-00 | METAL OXIDE (KV-29FS105 ONLY) | 68 | 5% | 2W | R533 | 1-215-879-11 | METAL OXIDE | 47K | 5% | 1W |
| R504 | 1-216-455-21 | METAL OXIDE (KV-34FS105/38FS105 ONLY) | 560 | 5% | 2W | R535 | 1-216-855-11 | METAL CHIP | 680K | 5% | 1/10W |
| R505 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |  R536 | 1-260-288-11 | CARBON | 0.47 | 5% | 1/2W |
| R506 | 1-215-861-00 | METAL OXIDE | 47 | 5% | 1W |  R537 | 1-260-288-11 | CARBON | 0.47 | 5% | 1/2W |
| R507 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W | R538 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R508 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | R541 | 1-215-922-11 | METAL OXIDE | 6.8K | 5% | 3W |
|  R509 | 1-260-328-11 | CARBON | 1K | 5% | 1/2W | R542 | 1-216-486-00 | METAL OXIDE (KV-29FS105 ONLY) | 8.2K | 5% | 3W |
|  R510 | 1-215-883-11 | METAL OXIDE | 33 | 5% | 2W | R542 | 1-215-921-11 | METAL OXIDE (KV-34FS105/38FS105 ONLY) | 4.7K | 5% | 3W |
| R512 | 1-215-910-00 | METAL OXIDE | 68 | 5% | 3W |  R543 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W |
| R515 | 1-216-839-11 | METAL CHIP (KV-29FS105 ONLY) | 33K | 5% | 1/10W |  R545 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W |
| R515 | 1-216-835-11 | METAL CHIP (KV-34FS105 ONLY) | 15K | 5% | 1/10W | R546 | 1-215-457-00 | METAL (KV-29FS105 ONLY) | 33K | 1% | 1/4W |
| R515 | 1-216-837-11 | METAL CHIP (KV-38FS105 ONLY) | 22K | 5% | 1/10W | R546 | 1-215-453-00 | METAL (KV-34FS105/38FS105 ONLY) | 22K | 1% | 1/4W |
|  R516 | 1-216-830-11 | METAL CHIP (KV-29FS105 ONLY) | 5.6K | 5% | 1/10W | R547 | 1-215-457-00 | METAL | 33K | 1% | 1/4W |
|  R516 | 1-216-828-11 | METAL CHIP (KV-34FS105 ONLY) | 3.9K | 5% | 1/10W | R548 | 1-216-486-00 | METAL OXIDE (KV-29FS105 ONLY) | 8.2K | 5% | 3W |
|  R516 | 1-216-829-11 | METAL CHIP (KV-38FS105 ONLY) | 4.7K | 5% | 1/10W | R548 | 1-215-921-11 | METAL OXIDE (KV-34FS105/38FS105 ONLY) | 4.7K | 5% | 3W |
| R517 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | R549 | 1-215-437-00 | METAL | 4.7K | 1% | 1/4W |
| R518 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |  R550 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W |
| R519 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | R551 | 1-215-873-00 | METAL OXIDE | 4.7K | 5% | 1W |
| R520 | 1-215-907-11 | METAL OXIDE | 22 | 5% | 3W |  R553 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W |
|  R523 | 1-216-837-11 | METAL CHIP (KV-29FS105 ONLY) | 22K | 5% | 1/10W | R554 | 1-215-876-00 | METAL OXIDE (KV-29FS105 ONLY) | 15K | 5% | 1W |
|  R523 | 1-216-834-11 | METAL CHIP (KV-34FS105/38FS105 ONLY) | 12K | 5% | 1/10W | R554 | 1-215-894-11 | METAL OXIDE (KV-34FS105/38FS105 ONLY) | 2.2K | 5% | 2W |
|  R524 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | R555 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
|  R525 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W | R556 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R526 | 1-216-377-11 | METAL OXIDE (KV-29FS105 ONLY) | 4.7 | 5% | 2W | R557 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R526 | 1-215-905-11 | METAL OXIDE (KV-34FS105/38FS105 ONLY) | 10 | 5% | 3W | R559 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W |
|  R528 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W | R560 | 1-215-922-11 | METAL OXIDE | 6.8K | 5% | 3W |
|  R529 | 1-218-724-11 | METAL CHIP | 22K | 0.50% | 1/10W | R561 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
|   R530 | 1-218-718-11 | METAL CHIP | 12K | 0.50% | 1/10W |  R563 | 1-214-798-21 | METAL | 1.8 | 1% | 1/2W |
|   R531 | 1-218-746-11 | METAL CHIP (KV-29FS105 ONLY) | 180K | 0.50% | 1/10W |  R564 | 1-247-895-91 | CARBON | 470K | 5% | 1/4W |
|   R531 | 1-218-734-11 | METAL CHIP (KV-34FS105/38FS105 ONLY) | 56K | 0.50% | 1/10W | R565 | 1-215-889-00 | METAL OXIDE | 330 | 5% | 2W |
|  R532 | 1-216-810-11 | METAL CHIP | 120 | 5% | 1/10W | R566 | 1-218-867-11 | METAL CHIP (KV-29FS105 ONLY) | 6.8K | 5% | 1/10W |
| | | | | | | R566 | 1-216-830-11 | METAL CHIP (KV-34FS105/38FS105 ONLY) | 5.6K | 5% | 1/10W |
| | | | | | |  R567 | 1-249-385-11 | CARBON | 2.2 | 5% | 1/4W |

NOTE: The components identified by shading and \triangle mark are critical for safety. Replace only with part number specified.




| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|------------------|--------------|--|--------|-------|-------|--------------------|--------------|---|--------|----|-------|
| R568 | 1-218-867-11 | METAL CHIP (KV-29FS105 ONLY) | 6.8K | 5% | 1/10W | R924 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R568 | 1-216-830-11 | METAL CHIP (KV-34FS105/38FS105 ONLY) | 5.6K | 5% | 1/10W | R932 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R569 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | R933 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R570 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W | R934 | 1-218-285-11 | METAL CHIP | 75 | 5% | 1/10W |
| R571 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W | R940 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R572 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W | R941 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R573 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W | R942 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| \triangle R574 | 1-214-798-21 | METAL | 1.8 | 1% | 1/2W | R943 | 1-216-830-11 | METAL CHIP | 5.6K | 5% | 1/10W |
| R576 | 1-215-907-11 | METAL OXIDE (KV-29FS105 ONLY) | 22 | 5% | 3W | R944 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R576 | 1-215-905-11 | METAL OXIDE (KV-34FS105/38FS105 ONLY) | 10 | 5% | 3W | R946 | 1-216-815-11 | METAL CHIP | 330 | 5% | 1/10W |
| R577 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W | R6001 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R578 | 1-214-798-21 | METAL | 1.8 | 1% | 1/2W | R6002 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R580 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | R6003 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R583 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R6004 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R584 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | SWITCH | | | | | |
| \triangle R590 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | S501 | 1-572-707-11 | SWITCH, LEVER | | | |
| \triangle R591 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | S502 | 1-572-707-11 | SWITCH, LEVER | | | |
| \triangle R592 | 1-216-363-00 | METAL OXIDE | 0.33 | 5% | 2W | TRANSFORMER | | | | | |
| \triangle R593 | 1-249-417-11 | CARBON (KV-29FS105 ONLY) | 1K | 5% | 1/4W | T501 | 1-433-836-11 | TRANSFORMER, HORIZONTAL DRIVE | | | |
| \triangle R593 | 1-249-420-11 | CARBON (KV-34FS105/38FS105 ONLY) | 1.8K | 5% | 1/4W | \triangle T502 | 1-435-869-11 | TRANSFORMER, FERRITE (PMT) | | | |
| \triangle R594 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | \triangle T503 | 1-453-310-11 | FBT ASSY, NX-4521//X4J4 (KV-29FS105 ONLY) | | | |
| \triangle R595 | 1-247-891-00 | CARBON | 330K | 5% | 1/4W | \triangle T503 | 1-453-338-11 | FBT ASSY, NX-4600//X4J4 (KV-34FS105 ONLY) | | | |
| \triangle R596 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | \triangle T503 | 1-453-338-21 | FBT ASSY, NX-4600//X4C4 (KV-38FS105 ONLY) | | | |
| \triangle R597 | 1-216-864-11 | SHORT CHIP | | | | \triangle T504 | 1-437-608-11 | TRANSFORMER, FERRITE (DFT) (KV-298FS105 ONLY) | | | |
| \triangle R598 | 1-218-867-11 | METAL CHIP | 6.8K | 0.50% | 1/10W | \triangle T504 | 1-433-533-12 | TRANSFORMER, FERRITE (DFT) (KV-34FS105/38FS105 ONLY) | | | |
| \triangle R599 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | \triangle T505 | 1-433-850-11 | TRANSFORMER, HORIZONTAL LINEAR (KV-29FS105 ONLY) | | | |
| R907 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | \triangle T505 | 1-435-098-21 | TRANSFORMER, HORIZONTAL LINEAR (KV-34FS105/38FS105 ONLY) | | | |
| R908 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | THERMISTOR | | | | | |
| R909 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | TH501 | 1-800-193-00 | THERMISTOR | | | |
| R910 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | TUNER | | | | | |
| R912 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | \triangle TU001 | 8-598-593-50 | TUNER, FSS BTF-WA421 | | | |
| R915 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/10W | | | | | | |
| R916 | 1-216-864-11 | SHORT CHIP | | | | | | | | | |
| R917 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | | | | | | |
| R918 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | | | | | | |
| R919 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | | | | | | |
| R921 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | | | | | | |
| R922 | 1-216-818-11 | METAL CHIP | 560 | 5% | 1/10W | | | | | | |
| R923 | 1-216-830-11 | METAL CHIP | 5.6K | 5% | 1/10W | | | | | | |


NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.



| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | | |
|--|--------------|----------------------|----------|-----|------|-------------------|--------------|--------------|-------------|-----------|---------------|--|--|
| <u>CRYSTAL</u> | | | | | | <u>IC</u> | | | | | | | |
| X001 | 1-781-931-21 | VIBRATOR, CRYSTAL | | | | | IC701 | 8-759-803-42 | IC | | LA6500-FA | | |
| X301 | 1-567-505-11 | OSCILLATOR, CRYSTAL | | | | | IC702 | 8-759-562-43 | IC | | TDA6108JF/N1B | | |
| X302 | 1-579-973-11 | VIBRATOR, CRYSTAL | | | | | IC703 | 8-759-701-59 | IC | | NJM78M09FA | | |
| X303 | 1-579-972-11 | VIBRATOR, CRYSTAL | | | | | <u>JACK</u> | | | | | | |
| <div>C</div> <div>* A-1401-898-A C (VAR) BOARD, MOUNTED (KV-29FS105 ONLY) * A-1401-992-A C (VAR) BOARD, MOUNTED (KV-34FS105/38FS105 ONLY) 4-382-854-11 SCREW (M3X10), P, SW (+)</div> | | | | | | J701 | 1-451-470-21 | SOCKET, CRT | | | | | |
| | | | | | | <u>COIL</u> | | | | | | | |
| | | | | | | L701 | 1-410-482-31 | INDUCTOR | | 100μH | | | |
| | | | | | | <u>TRANSISTOR</u> | | | | | | | |
| | | | | | | Q700 | 8-729-422-27 | TRANSISTOR | | 2SD601A-Q | | | |
| | | | | | | Q701 | 8-729-422-27 | TRANSISTOR | | 2SD601A-Q | | | |
| C701 | 1-126-947-11 | ELECT | 47μF | 20% | 35V | Q703 | 8-729-422-27 | TRANSISTOR | | 2SD601A-Q | | | |
| C702 | 1-136-497-81 | FILM | 0.1μF | 5% | 50V | <u>RESISTOR</u> | | | | | | | |
| C703 | 1-126-947-11 | ELECT | 47μF | 20% | 35V | R700 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | | |
| C704 | 1-107-652-11 | ELECT | 10μF | 20% | 250V | R701 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | | |
| C705 | 1-107-652-11 | ELECT | 10μF | 20% | 250V | R702 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W | | |
| C706 | 1-137-528-11 | MYLAR | 0.1μF | 10% | 250V | R703 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | | |
| C707 | 1-162-114-00 | CERAMIC | 0.0047μF | | 2KV | R704 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | | |
| C708 | 1-136-497-81 | FILM | 0.1μF | 5% | 50V | R705 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | | |
| C709 | 1-126-964-11 | ELECT | 10μF | 20% | 50V | R706 | 1-249-381-11 | CARBON | 1 | 5% | 1/4W | | |
| C710 | 1-126-964-11 | ELECT | 10μF | 20% | 50V | <div>⚠</div> R707 | 1-249-383-11 | CARBON | 1.5 | 5% | 1/4W | | |
| C711 | 1-102-074-00 | CERAMIC | 0.001μF | 10% | 50V | R708 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | | |
| C713 | 1-126-964-11 | ELECT | 10μF | 20% | 50V | R709 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | | |
| C714 | 1-126-947-11 | ELECT | 47μF | 20% | 35V | R710 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | | |
| <u>CONNECTOR</u> | | | | | | R711 | 1-260-328-11 | CARBON | 1K | 5% | 1/2W | | |
| * CN701 | 1-564-506-11 | PLUG, CONNECTOR | | | 3P | R712 | 1-260-328-11 | CARBON | 1K | 5% | 1/2W | | |
| CN702 | 1-695-915-11 | TAB (CONTACT) | | | | R713 | 1-260-328-11 | CARBON | 1K | 5% | 1/2W | | |
| CN703 | 1-695-915-11 | TAB (CONTACT) | | | | R714 | 1-260-087-11 | CARBON | 100 | 5% | 1/2W | | |
| CN704 | 1-785-879-11 | CONNECTOR, ONE TOUCH | | | | R715 | 1-260-132-11 | CARBON | 560K | 5% | 1/2W | | |
| * CN705 | 1-564-511-11 | PLUG, CONNECTOR | | | 8P | R716 | 1-260-087-11 | CARBON | 100 | 5% | 1/2W | | |
| * CN706 | 1-564-510-11 | PLUG, CONNECTOR | | | 7P | R717 | 1-216-375-00 | | 3.3 | | 2W | | |
| | | | | | | (KV-29FS105 ONLY) | | | | | | | |
| | | | | | | R718 | 1-216-373-11 | METAL OXIDE | 2.2 | 5% | 2W | | |
| | | | | | | R719 | 1-215-888-00 | METAL OXIDE | 220 | 5% | 2W | | |
| | | | | | | R720 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | | |
| | | | | | | R721 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | | |
| | | | | | | R722 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | | |
| | | | | | | R723 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | | |
| <u>DIODE</u> | | | | | | | | | | | | | |
| D701 | 8-719-901-83 | DIODE | 1SS83 | | | | | | | | | | |
| D702 | 8-719-901-83 | DIODE | 1SS83 | | | | | | | | | | |
| D703 | 8-719-901-83 | DIODE | 1SS83 | | | | | | | | | | |
| D704 | 8-719-074-25 | DIODE | PG104R | | | | | | | | | | |
| D705 | 8-719-108-12 | DIODE | RD9.1EW | | | | | | | | | | |



| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|--|--------------|----------------------|--------|----|-------|------------------------------|--------------|-----------------------------|---------|---------------|------|
| R724 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | C912 | 1-126-933-11 | ELECT | 100μF | 20% | 16V |
| R725 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | C913 | 1-102-074-00 | CERAMIC | 0.001μF | 10% | 50V |
| R726 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | C914 | 1-130-491-00 | MYLAR | 0.047μF | 5% | 50V |
| R727 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | C930 | 1-104-655-91 | ELECT | 470μF | 20% | 6.3V |
| <u>VARIABLE RESISTOR</u> | | | | | | C931 | 1-104-655-91 | ELECT | 470μF | 20% | 6.3V |
| RV701 | 1-241-656-11 | RES, ADJ, METAL FILM | 110M | | | <u>CONNECTOR</u> | | | | | |
| RV702 | 1-238-019-11 | RES, ADJ, METAL FILM | 47K | | | * CN901 | 1-764-333-11 | PIN, CONNECTOR(PCB)(V TYPE) | | 10P | |
|  <p>* A-1401-098-A V (VAR) BOARD, MOUNTED (KV-29FS105 ONLY)</p> <p>* A-1404-728-A V (VAR) BOARD, MOUNTED (KV-34FS105/38FS105 ONLY)</p> <p>4-382-854-11 SCREW (M3X10), P, SW (+)</p> <p><u>CAPACITOR</u></p> <p>C802 1-126-964-11 ELECT 10μF 20% 50V</p> <p>C803 1-137-378-11 MYLAR 0.22μF 5% 50V</p> <p>C804 1-137-378-11 MYLAR 0.22μF 5% 50V</p> <p>C805 1-131-985-21 FILM 0.033μF 5% 250V</p> <p>C808 1-162-970-11 CERAMIC CHIP 0.01μF 10% 25V</p> <p>C809 1-128-934-91 CERAMIC CHIP 0.33μF 20% 10V</p> <p>C810 1-130-495-00 MYLAR 0.1μF 5% 50V</p> <p>C811 1-129-725-00 FILM 0.082μF 5% 400V</p> <p>C812 1-162-970-11 CERAMIC CHIP 0.01μF 10% 25V</p> <p>C813 1-126-933-11 ELECT 100μF 20% 16V</p> <p>C821 1-162-970-11 CERAMIC CHIP 0.01μF 10% 25V</p> <p>C823 1-130-967-00 FILM 0.0027μF 5% 50V</p> <p>C824 1-165-176-11 CERAMIC CHIP 0.047μF 10% 16V</p> <p>C826 1-162-927-11 CERAMIC CHIP 100pF 5% 50V</p> <p>C862 1-126-964-11 ELECT 10μF 20% 50V</p> <p>C901 1-107-667-11 ELECT 2.2μF 20% 400V</p> <p>C902 1-107-364-11 MYLAR 0.01μF 10% 200V</p> <p>C903 1-126-935-11 ELECT 470μF 20% 16V</p> <p>C904 1-130-471-00 MYLAR 0.001μF 5% 50V</p> <p>C905 1-107-364-11 MYLAR 0.01μF 10% 200V</p> <p>C906 1-130-471-00 MYLAR 0.001μF 5% 50V</p> <p>C907 1-107-963-11 ELECT 33μF 20% 250V</p> <p>C908 1-126-935-11 ELECT 470μF 20% 16V</p> <p>C909 1-104-999-11 MYLAR 0.1μF 5% 200V</p> <p>C910 1-104-999-11 MYLAR 0.1μF 5% 200V</p> <p>C911 1-126-933-11 ELECT 100μF 20% 16V</p> | | | | | | * CN902 | 1-770-723-11 | CONNECTOR, BOARD TO BOARD | | 8P | |
| | | | | | | <u>DIODE</u> | | | | | |
| | | | | | | D804 | 8-719-074-25 | DIODE | | PG104R | |
| | | | | | | D805 | 8-719-991-33 | DIODE | | 1SS133T-77 | |
| | | | | | | D806 | 8-719-991-33 | DIODE | | 1SS133T-77 | |
| | | | | | | D807 | 8-719-210-21 | DIODE | | 11EQS04 | |
| | | | | | | D808 | 8-719-991-33 | DIODE | | 1SS133T-77 | |
| | | | | | | D813 | 8-719-991-33 | DIODE | | 1SS133T-77 | |
| | | | | | | D901 | 8-719-924-11 | DIODE | | MTZJ-T-77-22 | |
| | | | | | | D902 | 8-719-924-11 | DIODE | | MTZJ-T-77-22 | |
| | | | | | | D903 | 8-719-991-33 | DIODE | | 1SS133T-77 | |
| | | | | | | D905 | 8-719-510-02 | DIODE | | D1NS4 | |
| | | | | | | D906 | 8-719-404-50 | DIODE | | MA111-TX | |
| | | | | | | D907 | 8-719-404-50 | DIODE | | MA111-TX | |
| | | | | | | D908 | 8-719-404-50 | DIODE | | MA111-TX | |
| | | | | | | <u>IC</u> | | | | | |
| | | | | | | IC801 | 6-701-598-01 | IC | | UPC5023CS-184 | |
| | | | | | | <u>CHIP CONDUCTOR</u> | | | | | |
| | | | | | | JR802 | 1-216-864-11 | SHORT CHIP | | | |
| | | | | | | JR803 | 1-216-864-11 | SHORT CHIP | | | |
| | | | | | | <u>COIL</u> | | | | | |
| | | | | | | L801 | 1-406-989-21 | INDUCTOR | | 10MH | |
| | | | | | | L802 | 1-419-633-11 | INDUCTOR | | 10MH | |
| | | | | | | L803 | 1-412-529-81 | INDUCTOR | | 22μH | |
| | | | | | | L901 | 1-412-528-81 | INDUCTOR | | 18μH | |
| | | | | | | <u>TRANSISTOR</u> | | | | | |
| | | | | | | Q805 | 6-550-106-01 | TRANSISTOR | | KT8764 | |
| | | | | | | Q807 | 8-729-931-45 | TRANSISTOR | | IRF614 | |
| | | | | | | Q808 | 6-550-106-01 | TRANSISTOR | | KT8764 | |
| | | | | | | Q812 | 8-729-026-39 | TRANSISTOR | | 2SA933AS-QT | |
| | | | | | | Q901 | 8-729-053-87 | TRANSISTOR | | KTC4370A | |

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.



| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | | |
|-----------------|--------------|-------------|----------------|-------|-------|---------------------------|-------------------|--------------|--------------|------------|-------|-------|
| Q902 | 6-550-247-01 | TRANSISTOR | KTA1659A | | | (KV-34FS105/38FS105 ONLY) | | | | | | |
| Q903 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q | | | R837 | 1-218-714-11 | METAL CHIP | 8.2K | 0.50% | 1/10W | |
| Q904 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q | | | | (KV-29FS105 ONLY) | | | | | |
| Q905 | 8-729-424-02 | TRANSISTOR | 2SB709A-QRS-TX | | | | R837 | 1-218-740-11 | METAL CHIP | 100K | 0.50% | 1/10W |
| Q906 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | | (KV-34FS105/38FS105 ONLY) | | | | | | |
| Q907 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | | R840 | | 1-218-700-11 | METAL CHIP | 2.2K | 0.50% | 1/10W |
| Q908 | 8-729-424-02 | TRANSISTOR | 2SB709A-QRS-TX | | | | (KV-29FS105 ONLY) | | | | | |
| | | | | | | | R840 | 1-218-853-11 | METAL CHIP | 1.8K | 0.50% | 1/10W |
| | | | | | | (KV-34FS105/38FS105 ONLY) | | | | | | |
| RESISTOR | | | | | | | | | | | | |
| R809 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W | R841 | 1-218-708-11 | METAL CHIP | 4.7K | 0.50% | 1/10W | |
| | | | | | | | (KV-29FS105 ONLY) | | | | | |
| R809 | 1-216-832-11 | METAL CHIP | 8.2K | 5% | 1/10W | | R841 | 1-218-712-11 | METAL CHIP | 6.8K | 0.50% | 1/10W |
| | | | | | | (KV-34FS105/38FS105 ONLY) | | | | | | |
| R811 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W | R842 | | 1-218-700-11 | METAL CHIP | 2.2K | 0.50% | 1/10W |
| R814 | 1-215-862-11 | METAL OXIDE | 68 | 5% | 1W | | R855 | 1-218-716-11 | METAL CHIP | 10K | 0.50% | 1/10W |
| | | | | | | | R856 | 1-218-706-11 | METAL CHIP | 3.9K | 0.50% | 1/10W |
| R815 | 1-215-862-11 | METAL OXIDE | 68 | 5% | 1W | R857 | 1-218-724-11 | METAL CHIP | 22K | 0.50% | 1/10W | |
| R817 | 1-218-732-11 | METAL CHIP | 47K | 0.50% | 1/10W | | (KV-29FS105 ONLY) | | | | | |
| | | | | | | | R857 | 1-218-716-11 | METAL CHIP | 10K | 0.50% | 1/10W |
| R817 | 1-218-728-11 | METAL CHIP | 33K | 0.50% | 1/10W | (KV-34FS105/38FS105 ONLY) | | | | | | |
| | | | | | | R860 | | 1-218-716-11 | METAL CHIP | 10K | 0.50% | 1/10W |
| R818 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W | | R864 | 1-218-668-11 | METAL CHIP | 100 | 0.50% | 1/10W |
| R819 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | | | R866 | 1-249-438-11 | CARBON | 56K | 5% |
| R820 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W | R870 | | | 1-216-825-11 | METAL CHIP | 2.2K | 5% |
| | | | | | | | R876 | | 1-216-821-11 | METAL CHIP | 1K | 5% |
| R820 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W | | | | | | | |
| | | | | | | R890 | | 1-218-736-11 | METAL CHIP | 68K | 0.50% | 1/10W |
| R821 | 1-218-710-11 | METAL CHIP | 5.6K | 0.50% | 1/10W | | (KV-29FS105 ONLY) | | | | | |
| | | | | | | | R890 | 1-218-712-11 | METAL CHIP | 6.8K | 0.50% | 1/10W |
| R821 | 1-218-714-11 | METAL CHIP | 8.2K | 0.50% | 1/10W | (KV-34FS105/38FS105 ONLY) | | | | | | |
| | | | | | | R893 | | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R822 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W | | ⚠ R901 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| | | | | | | | ⚠ R902 | 1-249-385-11 | CARBON | 2.2 | 5% | 1/4W |
| R824 | 1-218-740-11 | METAL CHIP | 100K | 0.50% | 1/10W | ⚠ R903 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W | |
| R825 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W | | | | | | | |
| R826 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | R904 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W | |
| R827 | 1-218-708-11 | METAL CHIP | 4.7K | 0.50% | 1/10W | R905 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R828 | 1-218-728-11 | METAL CHIP | 33K | 0.50% | 1/10W | R906 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W | |
| | | | | | | ⚠ R907 | 1-249-385-11 | CARBON | 2.2 | 5% | 1/4W | |
| R829 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W | ⚠ R908 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W | |
| R833 | 1-218-710-11 | METAL CHIP | 5.6K | 0.50% | 1/10W | | | | | | | |
| | | | | | | R909 | 1-260-316-51 | CARBON | 100 | 5% | 1/2W | |
| R833 | 1-218-712-11 | METAL CHIP | 6.8K | 0.50% | 1/10W | R910 | 1-215-915-11 | METAL OXIDE | 470 | 5% | 3W | |
| | | | | | | R911 | 1-215-405-00 | METAL | 220 | 1% | 1/4W | |
| R834 | 1-218-704-11 | METAL CHIP | 3.3K | 0.50% | 1/10W | R912 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W | |
| | | | | | | R913 | 1-215-399-00 | METAL | 120 | 1% | 1/4W | |
| R834 | 1-218-700-11 | METAL CHIP | 2.2K | 0.50% | 1/10W | | | | | | | |
| | | | | | | R914 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W | |
| | | | | | | R915 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |





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| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|------------------|--------------|-------------|--------|-------|-------|---------------------|--------------|---------------------------|---------------|-----|------|
| R917 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | C634 | 1-126-964-11 | ELECT | 10 μ F | 20% | 50V |
| R918 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W | C635 | 1-126-963-11 | ELECT | 4.7 μ F | 20% | 50V |
| R919 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W | C637 | 1-136-165-00 | FILM | 0.1 μ F | 5% | 50V |
| R921 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | C638 | 1-104-665-11 | ELECT | 100 μ F | 20% | 25V |
| R922 | 1-249-397-11 | CARBON | 22 | 5% | 1/4W | C640 | 1-126-927-11 | ELECT | 2200 μ F | 20% | 10V |
| R923 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W | C642 | 1-126-969-11 | ELECT | 220 μ F | 20% | 50V |
| R930 | 1-216-864-11 | SHORT CHIP | | | | C643 | 1-136-165-00 | FILM | 0.1 μ F | 5% | 50V |
| R931 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | C645 | 1-162-964-11 | CERAMIC CHIP | 0.001 μ F | 10% | 50V |
| R932 | 1-218-696-11 | METAL CHIP | 1.5K | 0.50% | 1/10W | C647 | 1-126-947-11 | ELECT | 47 μ F | 20% | 35V |
| R933 | 1-216-864-11 | SHORT CHIP | | | | C648 | 1-164-143-11 | CERAMIC | 0.001 μ F | 10% | 1KV |
| \triangle R935 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W | C649 | 1-164-143-11 | CERAMIC | 0.001 μ F | 10% | 1KV |
| R938 | 1-216-864-11 | SHORT CHIP | | | | C650 | 1-100-120-51 | ELECT | 1000 μ F | 20% | 35V |
| | | | | | | C651 | 1-126-942-61 | ELECT | 1000 μ F | 20% | 25V |
| | | | | | | C652 | 1-165-176-11 | CERAMIC CHIP | 0.047 μ F | 10% | 16V |
| | | | | | | C653 | 1-126-960-11 | ELECT | 1 μ F | 20% | 50V |
| | | | | | | C665 | 1-126-927-11 | ELECT | 2200 μ F | 20% | 10V |
| | | | | | | C669 | 1-164-625-11 | CERAMIC | 680pF | 10% | 500V |
| | | | | | | C670 | 1-164-625-11 | CERAMIC | 680pF | 10% | 500V |
| | | | | | | C672 | 1-165-953-11 | FILM | 47000pF | 3% | 800V |
| | | | | | | C675 | 1-107-674-91 | ELECT | 0.47 μ F | 20% | 450V |
| | | | | | | C676 | 1-107-680-91 | ELECT | 22 μ F | 20% | 450V |
| | | | | | | C677 | 1-104-662-91 | ELECT | 22 μ F | 20% | 25V |
| | | | | | | C678 | 1-104-665-11 | ELECT | 100 μ F | 20% | 25V |
| | | | | | | C690 | 1-126-942-61 | ELECT | 1000 μ F | 20% | 25V |
| | | | | | | C1407 | 1-104-662-91 | ELECT | 22 μ F | 20% | 25V |
| | | | | | | C1408 | 1-126-768-11 | ELECT | 2200 μ F | 20% | 16V |
| | | | | | | C1413 | 1-127-715-91 | CERAMIC CHIP | 0.22 μ F | 10% | 16V |
| | | | | | | C1450 | 1-100-120-51 | ELECT | 1000 μ F | 20% | 35V |
| | | | | | | C1451 | 1-113-619-11 | CERAMIC CHIP | 0.47 μ F | | 10V |
| | | | | | | C1457 | 1-125-891-11 | CERAMIC CHIP | 0.47 μ F | 10% | 10V |
| | | | | | | C1458 | 1-125-891-11 | CERAMIC CHIP | 0.47 μ F | 10% | 10V |
| | | | | | | C1463 | 1-126-968-11 | ELECT | 100 μ F | 20% | 50V |
| | | | | | | CONNECTOR | | | | | |
| | | | | | | * CN503 | 1-573-963-11 | PIN, CONNECTOR (PC BOARD) | | | |
| | | | | | | \triangle * CN600 | 1-580-843-11 | PIN, CONNECTOR (POWER) | | | |
| | | | | | | * CN602 | 1-564-510-11 | PLUG, CONNECTOR | | 7P | |
| | | | | | | CN603 | 1-695-915-11 | TAB (CONTACT) | | | |
| | | | | | | | | (KV-38FS105 ONLY) | | | |
| | | | | | | * CN605 | 1-564-506-11 | PLUG, CONNECTOR | | 3P | |
| | | | | | | * CN1401 | 1-564-507-11 | PLUG, CONNECTOR | | 4P | |
| | | | | | | * CN1405 | 1-564-506-11 | PLUG, CONNECTOR | | 3P | |
| | | | | | | * CN1601 | 1-564-509-11 | PLUG, CONNECTOR | | 6P | |

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| REF. NO. | PART NO. | DESCRIPTION | VALUES | REF. NO. | PART NO. | DESCRIPTION | VALUES | |
|--|--------------|---------------------------|-------------|---|---|---------------|-----------------|----------|
| DIODE | | | | IC609 | 8-759-653-07 | IC | PQ09RD21 | |
| D501 | 8-719-404-50 | DIODE | MA111-TX | IC1405 | 8-759-573-40 | IC | TDA8580Q/N1 | |
| D600 | 6-500-397-11 | DIODE | GBJ4J10B9 | CHIP CONDUCTOR | | | | |
| D602 | 8-719-077-76 | DIODE | D2SB60A-F04 | JR1 | 1-216-864-11 | SHORT CHIP | | |
| D611 | 8-719-062-40 | DIODE | D4SBL20μF3 | JR2 | 1-216-864-11 | SHORT CHIP | | |
| D612 | 8-719-068-00 | DIODE | ERC04-06SE | JR3 | 1-216-864-11 | SHORT CHIP | | |
| D613 | 8-719-068-00 | DIODE | ERC04-06SE | JR6 | 1-216-864-11 | SHORT CHIP | | |
| D614 | 8-719-057-52 | DIODE | EZ0150AV1 | JR1402 | 1-216-864-11 | SHORT CHIP | | |
| D615 | 8-719-062-40 | DIODE | D4SBL20μF3 | JR1403 | 1-216-864-11 | SHORT CHIP | | |
| D618 | 8-719-979-64 | DIODE | μF4005PKG23 | JR1406 | 1-216-864-11 | SHORT CHIP | | |
| D620 | 8-719-404-50 | DIODE | MA111-TX | JR1407 | 1-216-864-11 | SHORT CHIP | | |
| D621 | 6-500-181-01 | DIODE | MA6D50 | JR1409 | 1-216-864-11 | SHORT CHIP | | |
| D625 | 8-719-510-02 | DIODE | D1NS4 | JR1410 | 1-216-864-11 | SHORT CHIP | | |
| D628 | 8-719-404-50 | DIODE | MA111-TX | JR1411 | 1-216-864-11 | SHORT CHIP | | |
| D629 | 8-719-110-31 | DIODE | RD12ESB2 | JR1412 | 1-216-864-11 | SHORT CHIP | | |
| D630 | 8-719-991-33 | DIODE | 1SS133T-77 | JR1416 | 1-216-864-11 | SHORT CHIP | | |
| D631 | 6-500-175-01 | DIODE | 1E3-TB | COIL | | | | |
| D633 | 8-719-068-00 | DIODE | ERC04-06SE | L505 | 1-412-529-81 | INDUCTOR | 22μH | |
| D643 | 8-719-032-12 | DIODE | D1NS6 | L600 | 1-412-533-21 | INDUCTOR | 47μH | |
| D644 | 8-719-979-64 | DIODE | μF4005PKG23 | L604 | 1-412-525-31 | INDUCTOR | 10μH | |
| D645 | 6-500-175-01 | DIODE | 1E3-TB | L605 | 1-412-519-11 | INDUCTOR | 3.3μH | |
| D647 | 6-500-175-01 | DIODE | 1E3-TB | L606 | 1-412-519-11 | INDUCTOR | 3.3μH | |
| D1401 | 8-719-929-15 | DIODE | HZS9.1NB2 | L608 | 1-412-529-81 | INDUCTOR | 22μH | |
| FUSE | | | | PHOTO COUPLER | | | | |
|  F601 | 1-532-506-51 | FUSE | 6.3A | 250V |  PH602 | 8-749-924-35 | PHOTO COUPLER | ON3171-R |
| FERRITE BEAD | | | |  PH603 | 8-749-924-35 | PHOTO COUPLER | ON3171-R | |
| FB602 | 1-410-397-21 | FERRITE | 1.1μH | IC LINK | | | | |
| FB604 | 1-410-397-21 | FERRITE | 1.1μH | PS1401 | 1-576-337-21 | IC LINK | 2.7A | 50V |
| FB605 | 1-410-397-21 | FERRITE | 1.1μH | TRANSISTOR | | | | |
| FB606 | 1-410-396-41 | FERRITE | 0.45μH | Q509 | 8-729-423-33 | TRANSISTOR | 2SC3311A-QRSTA | |
| FB607 | 1-410-396-41 | FERRITE | 0.45μH | Q600 | 8-729-052-32 | TRANSISTOR | IRFIB7N50A-LF31 | |
| FB609 | 1-410-397-21 | FERRITE | 1.1μH | Q601 | 8-729-052-32 | TRANSISTOR | IRFIB7N50A-LF31 | |
| FB616 | 1-410-397-21 | FERRITE | 1.1μH | Q604 | 8-729-424-02 | TRANSISTOR | 2SB709A-QRS-TX | |
| FB617 | 1-410-397-21 | FERRITE | 1.1μH | Q605 | 8-729-140-96 | TRANSISTOR | 2SD774-34 | |
| IC | | | | Q606 | 8-729-422-27 | TRANSISTOR | 2SD601A-Q | |
| IC600 | 8-759-670-30 | IC | MCZ3001D | Q608 | 8-729-922-37 | TRANSISTOR | 2SD2144S-UVW | |
| IC601 | 8-749-012-13 | IC | DM-58 | Q690 | 8-729-424-02 | TRANSISTOR | 2SB709A-QRS-TX | |
|  IC602 | 1-761-541-11 | SELECTION UNIT, RECTIFIER | | Q691 | 8-729-424-02 | TRANSISTOR | 2SB709A-QRS-TX | |
| IC605 | 8-759-450-47 | IC | BA05T | Q1401 | 8-729-424-02 | TRANSISTOR | 2SB709A-QRS-TX | |

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| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|----------|-------------------|-------------|--------|-------|-------|-------------|--------------|-------------------------------|--------|---------------|-------|
| RESISTOR | | | | | | R688 | 1-205-998-11 | CEMENTED | 1 | 5% | 10W |
| R501 | 1-244-207-11 | WIREWOUND | 3.3 | 5% | 10W | R690 | 1-260-300-11 | CARBON | 4.7 | 5% | 1/2W |
| | (KV-38FS105 ONLY) | | | | | R691 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R502 | 1-244-207-11 | WIREWOUND | 3.3 | 5% | 10W | R692 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| | (KV-38FS105 ONLY) | | | | | R693 | 1-247-891-00 | CARBON | 330K | 5% | 1/4W |
| R534 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | | | | | | |
| R535 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | R694 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R604 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R697 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| | | | | | | R698 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W |
| R605 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | △ R699 | 1-218-265-11 | METAL | 8.2M | 5% | 1W |
| R606 | 1-216-864-11 | SHORT CHIP | | | | R1413 | 1-216-789-11 | METAL CHIP | 2.2 | 5% | 1/10W |
| R608 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | | | | | | |
| R609 | 1-205-998-11 | CEMENTED | 1 | 5% | 10W | R1414 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R610 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R1415 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| | | | | | | R1416 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R611 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | R1450 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R612 | 1-260-131-11 | CARBON | 470K | 5% | 1/2W | R1457 | 1-218-708-11 | METAL CHIP | 4.7K | 0.50% | 1/10W |
| R613 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | | | | | | |
| R614 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W | R1458 | 1-218-708-11 | METAL CHIP | 4.7K | 0.50% | 1/10W |
| R615 | 1-202-933-61 | FUSIBLE | 0.1 | 10% | 1/2W | R1461 | 1-218-724-11 | METAL CHIP | 22K | 0.50% | 1/10W |
| | | | | | | R1462 | 1-218-724-11 | METAL CHIP | 22K | 0.50% | 1/10W |
| R616 | 1-216-822-11 | METAL CHIP | 1.2K | 5% | 1/10W | R1481 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R617 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W | R1482 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R618 | 1-216-864-11 | SHORT CHIP | | | | | | | | | |
| △ R619 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | R1487 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R620 | 1-215-857-71 | METAL OXIDE | 10 | 5% | 1W | | | | | | |
| | | | | | | RELAY | | | | | |
| R625 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W | △ RY501 | 1-755-198-11 | RELAY, AC POWER | | | |
| R626 | 1-218-715-11 | METAL CHIP | 9.1K | 0.50% | 1/10W | RY502 | 1-755-318-11 | RELAY, POWER | | | |
| R627 | 1-215-481-00 | METAL | 330K | 1% | 1/4W | | | (KV-38FS105 ONLY) | | | |
| R628 | 1-260-131-11 | CARBON | 470K | 5% | 1/2W | △ RY600 | 1-755-388-11 | RELAY (AC POWER) | | | |
| R629 | 1-215-481-00 | METAL | 330K | 1% | 1/4W | △ RY601 | 1-755-395-11 | RELAY (AC POWER) | | | |
| | | | | | | TRANSFORMER | | | | | |
| △ R630 | 1-215-481-00 | METAL | 330K | 1% | 1/4W | △ T601 | 1-419-672-12 | COIL, LINE FILTER | | | |
| R631 | 1-218-720-11 | METAL CHIP | 15K | 0.50% | 1/10W | △ T604 | 1-437-606-12 | CONVERTER TRANSFORMER | | | |
| R632 | 1-218-668-11 | METAL CHIP | 100 | 0.50% | 1/10W | △ T605 | 1-437-851-11 | TRANSFORMER ASSY, POWER (HST) | | | |
| △ R640 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | | | | | | |
| R647 | 1-218-667-11 | METAL CHIP | 91 | 0.50% | 1/10W | THERMISTOR | | | | | |
| | | | | | | THP501 | 1-803-540-11 | THERMISTOR | | | |
| △ R658 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W | THP600 | 1-803-586-11 | THERMISTOR, NTC | | | |
| △ R659 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W | | | | | | |
| R660 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | VARISTOR | | | | | |
| R667 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | VDR600 | 1-803-967-11 | VARISTOR | | (ENE621D-14A) | |
| △ R668 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | VDR601 | 1-803-614-11 | VARISTOR | | ENE471D-20A | |
| | | | | | | | | | | | |
| R670 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W | | | | | | |
| R671 | 1-243-979-71 | METAL OXIDE | 0.1 | 5% | 2W | | | | | | |
| R672 | 1-243-979-71 | METAL OXIDE | 0.1 | 5% | 2W | | | | | | |
| △ R674 | 1-220-926-11 | FUSIBLE | 0.47 | 10% | 1/2W | | | | | | |
| R687 | 1-205-998-11 | CEMENTED | 1 | 5% | 10W | | | | | | |



| REF. NO. | PART NO. | DESCRIPTION | VALUES | | | REF. NO. | PART NO. | DESCRIPTION | VALUES | | |
|---|----------|-------------|--------|--|--|--|----------|-------------|--------|--|--|
| <div><div>HS</div><div><div><div>* A-1401-128-A HS (VAR) BOARD, MOUNTED (KV-29FS105/34FS105 ONLY)</div><div>* A-1415-671-A HS (VAR) BOARD, MOUNTED (KV-38FS105 ONLY)</div></div><div><div>CAPACITOR</div><div><div>C10011-126-935-11ELECT470µF20%16V</div><div>C10021-164-096-11CERAMIC0.01µF50V</div><div>C12341-126-960-11ELECT1µF20%50V</div><div>C12351-126-960-11ELECT1µF20%50V</div><div>C12381-126-959-11ELECT0.47µF20%50V</div></div><div><div>CONNECTOR</div><div><div>* CN10041-564-509-11PLUG, CONNECTOR6P</div><div>* CN10051-564-508-11PLUG, CONNECTOR5P</div><div>* CN10061-564-507-11PLUG, CONNECTOR4P</div></div><div><div>DIODE</div><div><div>D10018-719-929-15DIODEHZS9.1NB2</div><div>D10028-719-070-79DIODELNK0220022G1</div><div>D12358-719-108-12DIODERD9.1EW</div><div>D12368-719-108-12DIODERD9.1EW</div></div><div><div>IC</div><div><div>IC10018-742-212-20HYB IC</div><div>SBX3081-71</div></div><div><div>JACK</div><div><div>J12311-794-048-11JACK, PIN</div><div>3P</div></div><div><div>RESISTOR</div><div><div>R10011-249-417-11CARBON1K5%1/4W</div><div>R10041-249-417-11CARBON1K5%1/4W</div><div>R10071-247-807-31CARBON1005%1/4W</div><div>R10081-249-425-11CARBON4.7K5%1/4W</div><div>R10091-249-420-11CARBON1.8K5%1/4W</div><div>R10101-249-417-11CARBON1K5%1/4W</div><div>R10111-249-416-11CARBON8205%1/4W</div><div>R12011-249-417-11CARBON1K5%1/4W</div><div>R12021-249-420-11CARBON1.8K5%1/4W</div><div>R12031-249-425-11CARBON4.7K5%1/4W</div></div></div></div></div></div></div></div></div></div> | | | | | | <div><div>R12341-247-804-11CARBON755%1/4W</div><div>R12351-249-409-11CARBON2205%1/4W</div><div>R12361-249-441-11CARBON100K5%1/4W</div><div>R12371-249-409-11CARBON2205%1/4W</div><div>R12381-249-441-11CARBON100K5%1/4W</div></div> <div><div>SWITCH</div><div><div>S10011-692-431-21SWITCH, TACTILE</div><div>S10021-692-431-21SWITCH, TACTILE</div><div>S10031-692-431-21SWITCH, TACTILE</div><div>S10041-692-431-21SWITCH, TACTILE</div><div>S10051-692-431-21SWITCH, TACTILE</div><div>S10061-692-431-21SWITCH, TACTILE</div><div>S10071-762-816-11SWITCH, TACTILE</div><div>S10081-762-816-11SWITCH, TACTILE</div></div><div><div>ACCESSORIES AND PACKING</div><div><div>4-041-997-01BAG, POLYETHYLENE (KV-29FS105 ONLY)</div><div>* 4-066-646-02BAG, PROTECTION (KV-38FS105 ONLY)</div><div>* 4-066-845-02BAG, PROTECTION (KV-29FS105/34FS105 ONLY)</div><div>* 2-025-253-01CARTON, INDIVIDUAL (KV-29FS105 ONLY)</div><div>* 2-050-763-01CARTON, INDIVIDUAL (KV-34FS105 ONLY)</div><div>* 4-102-882-01CARTON, INDIVIDUAL (KV-38FS105 ONLY)</div><div>* 4-102-883-01CUSHION, FRONT (UPPER) (KV-38FS105 ONLY)</div><div>* 4-089-390-01CUSHION, LOWER (KV-29FS105 ONLY)</div><div>* 4-090-754-01CUSHION, LOWER (KV-34FS105 ONLY)</div><div>* 4-102-885-01CUSHION, LOWER (KV-38FS105 ONLY)</div><div>* 4-090-753-01CUSHION, REAR (UPPER) (KV-34FS105 ONLY)</div><div>* 4-102-884-01CUSHION, REAR (UPPER) (KV-38FS105 ONLY)</div><div>* 4-089-389-01CUSHION, UPPER (KV-29FS105 ONLY)</div><div>* 4-090-752-01CUSHION, UPPER (KV-34FS105 ONLY)</div></div></div></div> | | | | | |

| REF. NO. | PART NO. | DESCRIPTION | VALUES | REF. NO. | PART NO. | DESCRIPTION | VALUES |
|----------|--------------|---|--------|----------|----------|-------------|--------|
| * | 4-093-035-01 | CUSHION, UPPER (REAR) | | | | | |
| | | (KV-29FS105 ONLY) | | | | | |
| | 4-089-081-53 | MANUAL, INSTRUCTION | | | | | |
| | | (KV-29FS150/34FS105/38FS105 BRAZIL ONLY) | | | | | |
| | 4-094-207-43 | MANUAL, INSTRUCTION | | | | | |
| | | (KV-29FS105/34FS105/38FS105 ARGENTINA ONLY) | | | | | |
| | | <u>REMOTE COMMANDER</u> | | | | | |
| | 1-476-680-12 | REMOTE COMMANDER (RM-Y180) | | | | | |
| | 4-978-977-11 | BATTERY COVER (RM-Y180) | | | | | |

In an effort to reduce the size of this pdf file the tiled schematics are not attached to this Service Manual. To receive a complete set of the tiled schematics for this manual please submit a request to Nita Wardlaw at nita.wardlaw@am.sony.com.